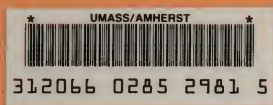


MASS. WRA 1.16: 998-2000/[V.1]



# Capital Improvement Program

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**FY98-00**

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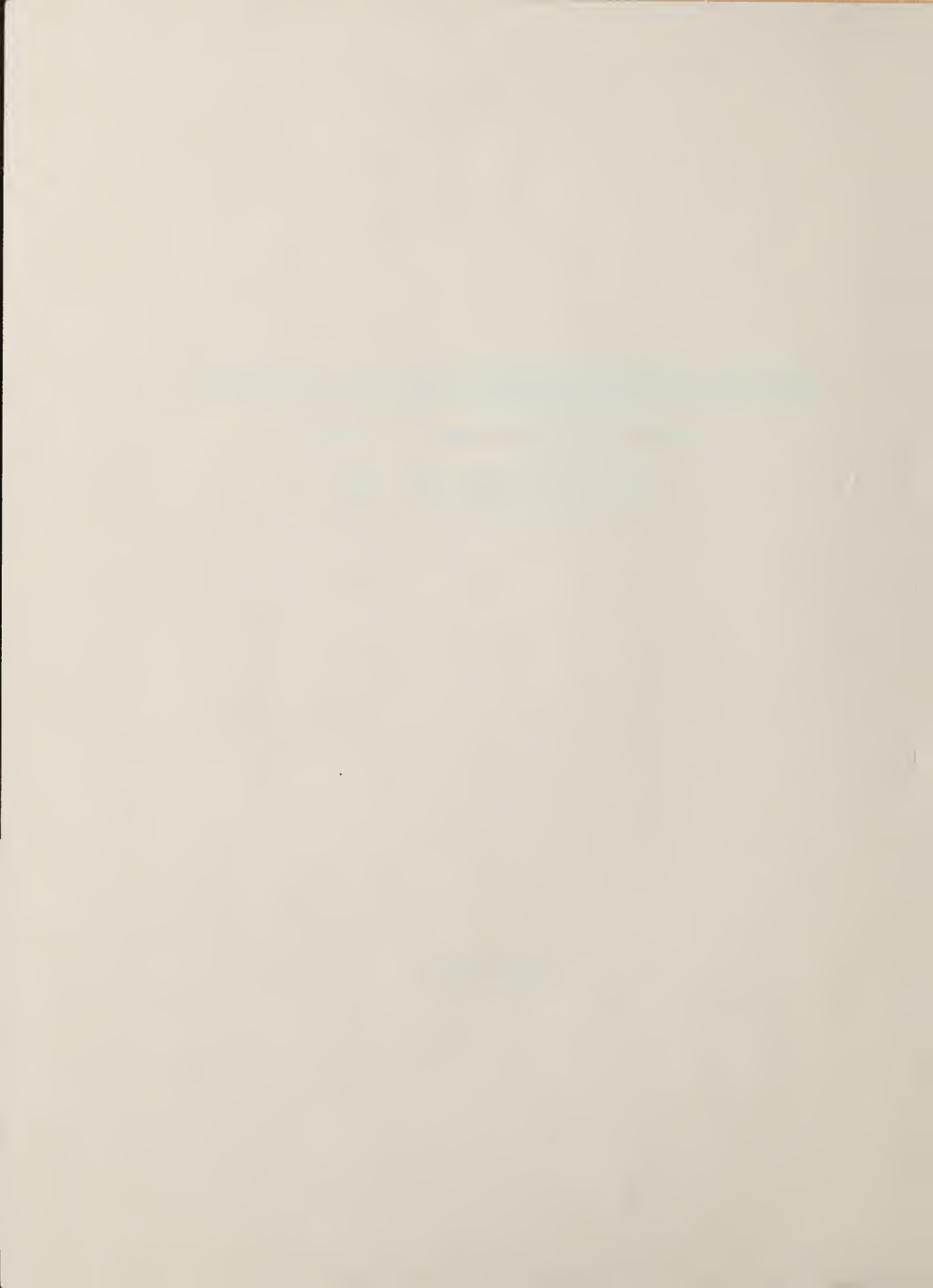


**MASSACHUSETTS WATER RESOURCES AUTHORITY**

**CAPITAL IMPROVEMENT PROGRAM**

**FISCAL YEARS 1998 - 2000**

**October 1997**



**Prepared under the direction of**

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## MASSACHUSETTS WATER RESOURCES AUTHORITY

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October 20, 1997

Joseph C. Foti, Chairman  
MWRA Advisory Board  
11 Beacon Street  
Boston, MA 02108

Dear Chairman Foti and Advisory Board Members:

This letter transmits to the Advisory Board MWRA's Capital Improvement Program (CIP) for fiscal years 1998 to 2000. While the CIP includes several new capital initiatives, there are no significant shifts in policy direction or in the projected flow and volume of capital spending over the next ten years compared to the FY97-99 CIP. The MWRA Board of Directors adopted this budget on June 25, 1997, prior to the start of the new fiscal year on July 1.

The CIP forecasts annual capital spending for FY98 through FY07 and beyond, and MWRA uses the financial information it provides in the formulation of rates and charges to user communities. Capital projects in the CIP support MWRA's mission to provide reliable, cost-effective, high quality water and sewer services.

The FY98-00 CIP includes 99 projects comprised of more than 760 project phases. It provides a three-year budget of \$1.4 billion and a ten-year budget \$3.0 billion for capital improvements to the wastewater and waterworks systems.

The enclosed FY98-00 CIP Budget Document includes an Executive Summary which presents an overview of 100-year actual and planned spending for wastewater and waterworks improvements, anticipated capital spending for the next ten years by program area, anticipated grant revenue and capital funding requirements needed to support the capital program, and the impact of operating new facilities on the Current Expense Budget. The remainder of the budget document presents budget summaries for each project and detailed expenditure forecasts.

Also enclosed is a separate document, a CIP projects binder, which includes detailed descriptions of the projects including project purpose, background and history, maps, and descriptions of the scope of each project subphase (contract). This binder will be updated on an annual basis and distributed with the final budget document each year.

### Highlights of the FY98-00 Capital Improvement Program

- ▶ **Commitment to Improving Boston Harbor Water Quality by Completing the Boston Harbor Project.**  
MWRA has expended more than \$2.8 billion on the Boston Harbor Project to date,

with FY94 marking the peak year of construction spending. Another \$483 million is required from FY98 through FY01 to successfully complete and begin full operation of all components of the project. Completion of BHP's final major milestone, the last secondary treatment battery, is scheduled for December 1999 (FY00).

- ▶ **Commitment to Delivering Safe and Healthful Drinking Water.**  
The FY98-00 CIP marks the initial years of shifting MWRA capital resources from the construction of primary and secondary wastewater treatment facilities to the design and construction of facilities that supply, transmit, and protect drinking water. This includes construction of the MetroWest Tunnel, Norumbega and other covered storage facilities, and the Walnut Hill Water Treatment Plant. In FY00, Waterworks expenditures will surpass Wastewater expenditures as a percentage of total MWRA capital spending.
- ▶ **Commitment to Rehabilitating and Maintaining Existing Assets.**  
MWRA has invested more than \$3 billion to date in the construction of new facilities and the rehabilitation of existing systems. As our organizational focus shifts from construction of new facilities to operational efficiency, reinvestment in and maintenance of existing assets becomes an ever increasing priority. Pipeline, pump station, and other facilities improvements comprise 25% of the ten year capital budget.

Waterworks pipeline projects included in the CIP are projected to provide more than 50 miles of new and rehabilitated pipe to the waterworks system between FY98 and FY02. Wastewater interception and pumping projects are projected to add 3.5 miles of newly constructed interceptors and 10.9 miles of rehabilitated interceptors between FY98 and FY02.

- ▶ **Commitment to Limiting Storm Induced Overflows and Eliminating CSO discharges.**  
Increases in the CSO budget, based on revised estimates for hazardous materials removal and tunnel construction, reflect progress made in site selection and design for long-term CSO control plan projects. The portfolio of local sewer improvement projects included in the CSO System Optimization Program is scheduled for completion in FY00.

## **FY98-07 Summary**

The CIP includes a ten-year capital budget (FY98-07) of \$2.97 billion, compared to \$3.09 in the FY97-99 CIP for FY97-06. The decrease in the ten-year budget is primarily the result of one less year of Boston Harbor Project spending (the FY97 BHP budget was \$241.5 million), offset by increases described below and \$60.5 million in projected spending for FY07.

Total project costs, which include all prior expenditures for active CIP projects through the end of FY97, increase \$246.2 million compared to the FY97-99 CIP. This change is primarily comprised of increases in the budgets for BHP (\$90 million), CSOs (\$89 million), eight new projects (\$19

million), and the Walnut Hill Water Treatment Plant (\$17 million).

### **Projected Annual Spending for Fiscal Years 98-00**

The FY98-00 CIP provides for an estimated \$1.41 billion in capital spending for fiscal year 1998 through fiscal year 2000. This compares to \$1.25 billion for the same fiscal years in the FY97-99 CIP. Annual capital spending projections increase by \$58 million for FY98 (13%) and by \$98 million for FY99 (25%) primarily as a result of increases in the BHP and CSO budgets.

Wastewater spending increases \$24 million during FY98-00 primarily as a result of increases in the CSO budget. BHP spending increases \$94 million during FY98-00 primarily as a result of change order activity on eight of the largest active contracts (\$30 million), the award of the Secondary Battery C construction contract (\$20.3 million), deferred spending from the previous year (\$12 million), and increases for the Inter-Island Tunnel (\$8.3 million) and the Nut Island Headworks (\$7.8 million). Waterworks projected annual spending for this period is unchanged from the FY97-99 budget.

### **The Future**

MWRA remains committed to its mission to provide high quality, cost-effective water and sewer service to its customers. To this end, we continue to seek new cost saving measures to assure that every capital project is completed in the most cost-effective manner, and will continue to work to improve project cost and schedule accountability.

We appreciate the Advisory Board's efforts to assist us in preparing the most effective and responsible capital program which meets the service needs of our rate payers, while managing the rate impacts of our essential capital program. We look forward to your continuing input as we begin developing the proposed FY99-01 CIP.

Sincerely,

A handwritten signature in cursive script that reads "Douglas MacDonald (TP)".

Douglas B. MacDonald  
Executive Director



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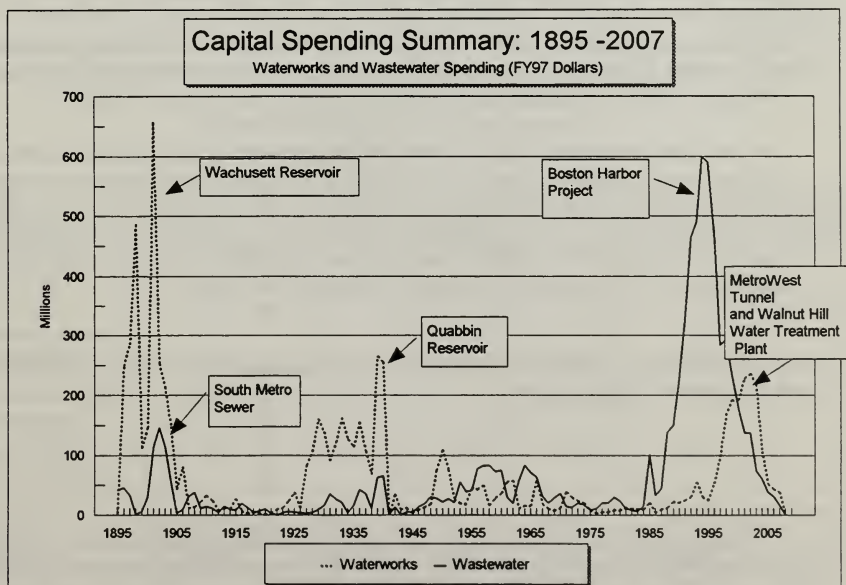




## EXECUTIVE SUMMARY

MWRA has completed approximately half of its planned improvements to major components of its wastewater and waterworks treatment, interceptor, pumping and distribution systems. For the 21 year period 1985-2007, MWRA is projected to spend \$6.8 billion, nearly 70 percent of which will support improvements to the wastewater treatment and interceptor system. This extensive investment reflects both the very low levels of capital investment in the 20 years prior to MWRA's creation, and the need on a periodic basis to make major improvements to the system.<sup>1</sup>

MWRA customers today continue to enjoy the benefit of many of the capital projects implemented as far back as the 1890s, such as the development of the Wachusett Reservoir which continues to provide a vital link in the waterworks supply and distribution system. In terms of the magnitude of capital spending, time adjusted peak spending for Wachusett Reservoir exceeded peak spending for the Boston Harbor Project, and the \$1.7 billion expended during the 13 year period 1927 to 1939 for development of the Quabbin Reservoir, Quabbin Aqueduct, Norumbega Reservoir, and Hultman Aqueduct approximates the actual and planned level of \$1.6 billion in investment for the Waterworks program for the 13 year period 1995 to 2007 for the MetroWest Tunnel, the Walnut Hill and Quabbin Water Treatment Plants, six covered storage facilities, and numerous distribution and pumping projects.



<sup>1</sup> MWRA's predecessors, the Commonwealth of Massachusetts' Metropolitan District Commission (MDC) and the Metropolitan District Water Supply Commission (MDWSC), were responsible for pre-1985 expenditures.

## The FY98-00 Capital Improvement Program

This Capital Improvement Program (CIP) presents plans for capital investment in 99 projects at an estimated cost of \$1.4 billion for FY98-00.<sup>2</sup>

### Highlights of the FY98-00 Capital Improvement Program

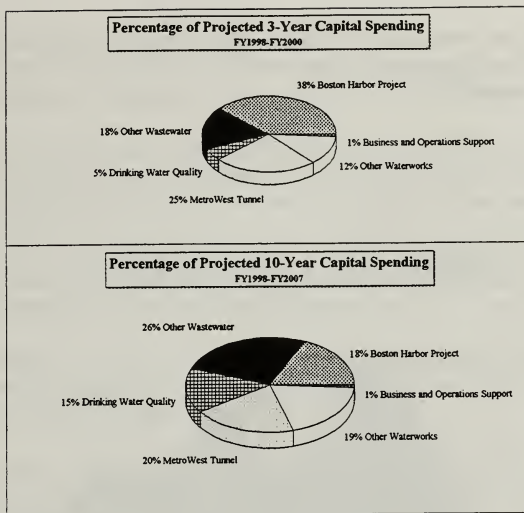
- ▶ The CIP presents no significant shifts in planned capital expenditures or priorities from the FY97-99 CIP.
- ▶ The Boston Harbor Project's last major milestone, completion of the last secondary treatment battery, is scheduled for completion in December 1999 (FY00). As of June 30, 1997, the project had achieved physical progress of 90.5 percent.
- ▶ The FY98-00 period includes the first years of significant construction for the major waterworks projects designed to improve supply, transmission, and protection of drinking water. In FY99, Waterworks capital spending will exceed BHP spending.
- ▶ The Combined Sewer Overflow (CSO) program closes out its planning phase, and five of nine MWRA-managed and all seven community-managed projects will be in design in FY98. For the period FY98-00, almost \$100 million is budgeted for CSO improvements.
- ▶ The Braintree-Weymouth Relief Facilities project includes \$157 million for wastewater improvements to reduce community infiltration and inflow and provide capacity for peak flows in Braintree, Hingham, Holbrook, Randolph, Weymouth, and sections of Quincy.<sup>3</sup>
- ▶ Ten-year planned spending includes infrastructure investment of \$334 million for waterworks distribution and pumping projects and \$243 million for wastewater interception and pumping projects.
- ▶ The CIP includes \$19.2 million for new projects, including \$15.5 million for design and construction of an on-site sodium hypochlorite plant at Deer Island.

The pie charts on the next page illustrate the shift in capital spending from the Boston Harbor Project to the Waterworks capital program.

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<sup>2</sup>The FY98-00 CIP budget is stated in December 1997 dollars, including estimates for future project phases (unawarded contracts) which have been inflated by 2.92 percent to bring their value from a December 1996 benchmark to a December 1997 benchmark. Budget estimates in this CIP document do not include inflation beyond December 1997.

<sup>3</sup>One component of the project, a pipeline to carry Deer Island Treatment Plant sludge from Nut Island to the Fore River Pelletizing Plant, was proceeding on dual track (marine pipeline or tunnel) at the time this budget was prepared. In October 1997, the Board of Directors approved the deep rock tunnel option.



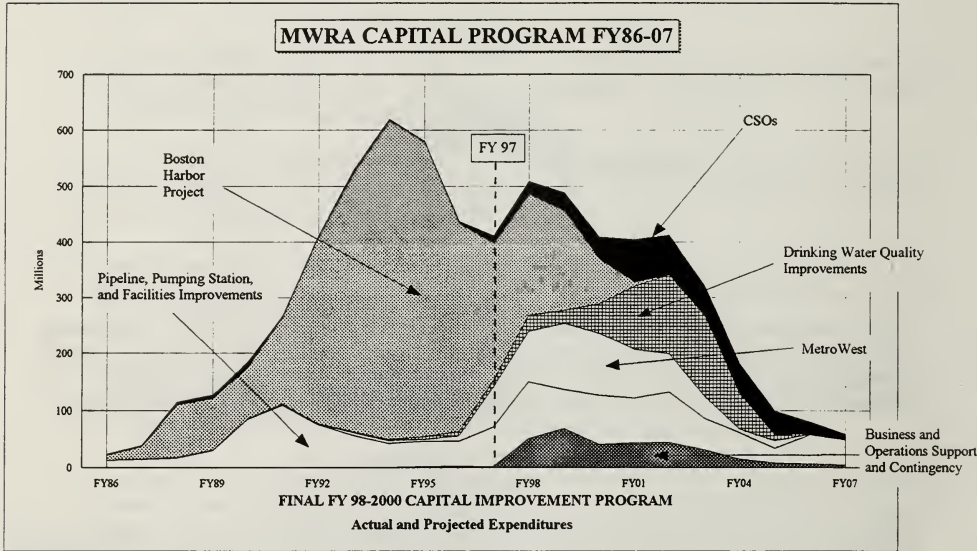
MWRA has already undertaken substantial work on many of the projects in the CIP, as authorized in prior capital budgets, and anticipates that all projects included in this document will begin by FY06. Estimated expenditures on all projects from MWRA's inception in 1985 through the end of FY97 are \$3.8 billion.<sup>4</sup> The total projected capital investment for the ten-year period FY98-07 is \$3 billion.

### Projected Expenditures by Program Area (in millions)

Capital Program Area	FY 98	FY 99	FY 00	FY 98-00 Total	FY 01-2007	10-Year Total
Boston Harbor Project	\$217.6	\$178.1	\$80.4	\$476.0	\$7.0	\$483.1
Wastewater System Improvements	\$74.0	\$52.7	\$96.1	\$222.8	\$482.8	\$705.6
Waterworks System Improvements	\$166.0	\$188.6	\$190.9	\$545.4	\$919.3	\$1,464.7
Business and Operations Support	\$2.9	\$6.5	\$2.8	\$12.2	\$13.5	\$25.7
Contingency	\$48.8	\$62.9	\$39.3	\$151.1	\$142.3	\$293.4
<b>TOTAL</b>	<b>\$509.3</b>	<b>\$488.7</b>	<b>\$409.5</b>	<b>\$1,407.5</b>	<b>\$1,564.9</b>	<b>\$2,972.4</b>

<sup>4</sup>Includes approximately \$300 million in completed projects which are no longer included in the CIP budget totals. See the FY98-00 CIP projects binder for a detailed list of these projects.

As illustrated below, peak spending for the Boston Harbor Project occurred in FY94. Peak spending for the MetroWest Tunnel is expected to occur in FY99, for CSOs in FY01, and for the Walnut Hill Water Treatment Plant in FY02.



## New Projects

The CIP includes eight new **wastewater** projects at a cost of \$19.1 million:

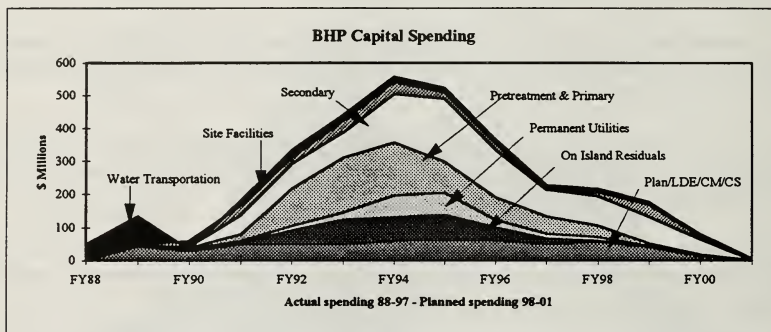
- ▶ On-Site Sodium Hypochlorite Plant, a \$15.5 million project scheduled for completion in June 2000, will generate sodium hypochlorite needed for disinfection and odor control on Deer Island, potentially saving MWRA millions in operating costs over its 15-year useful life.
- ▶ Deer Island As Needed Design/Construction Services/Resident Inspection, a \$500,000 program starting in July 1998, will provide Deer Island Treatment Plant (DITP) staff with as needed design and resident inspection services in support of construction.
- ▶ Deer Island Construction Services Contracts (CSCs) will support \$1.5 million in as-needed construction services managed by the Sewerage Division to ensure a safe and efficient transition to full operation of the Deer Island plant.
- ▶ Deer Island Coastal Protection will restore Deer Island's shoreline from the effects of construction or erosion in the event it is required. Contingency funds will be used to provide budget authorization during the fiscal year if needed.
- ▶ Deer Island Plant-Wide Systems, a \$250,000 project scheduled for completion in FY99, will implement a plant-wide computerized system to allow plant engineers to more efficiently facilitate the repair and maintenance of mechanical systems.
- ▶ Clinton Landfill Liner Repair, a \$400,000 project scheduled for completion in FY98, will repair the sludge landfill liner of Basin 1 at the Clinton Treatment Plant, if required by the Massachusetts Department of Environmental Protection.
- ▶ Wastewater Central Monitoring will study the feasibility of automating components of the wastewater transport system monitoring and controlling operations from a central location. \$600,000 is budgeted for a study to document existing conditions of transport facilities, assess monitoring and communications technology, and recommend a cost-effective implementation approach.
- ▶ West Roxbury Tunnel will study the condition of the sewer which transports flows from the Wellesley Extension Relief Sewer through the West Roxbury portion of Boston to the High Level Sewer. \$323,000 is budgeted for inspection and an engineering report which will recommend alternatives for rehabilitation and provide cost estimates.

The CIP includes one new **waterworks** project:

- ▶ The Winsor Dam Hydroelectric project will restore a facility in Belchertown to generate electricity to potentially meet the needs of other MWRA facilities in the area. \$85,000 has been budgeted for preliminary permit studies, licensing, and design.

### Boston Harbor Project

The Boston Harbor Project (BHP) program is comprised of two CIP projects: Deer Island Primary and Secondary Treatment and Water Transportation. These two projects, which are managed by the Program Management Division (PMD), include more than 130 active professional service and construction contracts necessary to implement the \$3.4 billion program. Through June 30, 1997, 90.5 percent of construction had been completed.



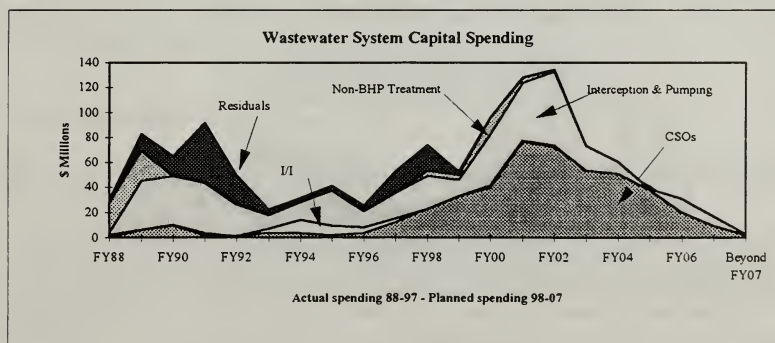
Remaining key milestones include:

- ▶ Commence operation of Secondary Treatment Battery A in August 1997, and Secondary Battery B in October 1997.
- ▶ Complete all facilities necessary to transport and treat south flow by November 1997, including the Inter-Island Tunnel (included in the Pretreatment and Primary phase), South System Pump Station, and the Nut Island Headworks.
- ▶ Complete the Effluent Outfall Tunnel (included in the Secondary phase) by November 1998.
- ▶ Award the remaining large construction contracts in FY98: Western Shoreline Protection (scheduled for completion December 1999) and Final Paving and Site Completion (scheduled for completion June 2000).
- ▶ Commence operation of Secondary Battery C by December 1999.

## Wastewater System Improvements

The wastewater program area consists of 44 projects managed by the Sewerage Division in the five program categories presented below.

Wastewater Program Categories	FY98	FY99	FY00	FY 98-00 Total	FY 01-2007	10-Year Total
Interception and Pumping	\$26.4	\$12.9	\$41.3	\$80.6	\$154.9	\$242.8
Treatment (Non-BHP)	\$3.8	\$3.9	\$13.5	\$21.2	\$4.9	\$26.1
CSOs	\$23.5	\$33.3	\$39.8	\$96.6	\$331.4	\$430.7
Residuals	\$21.0	\$3.1	\$0.0	\$24.1	\$0.6	\$24.7
I/I (Grants, loans, and repayments)	(\$0.8)	(\$0.4)	\$1.5	\$0.3	(\$9.0)	(\$9.2)
Total:	\$74.0	\$52.7	\$96.1	\$222.8	\$482.8	\$715.1

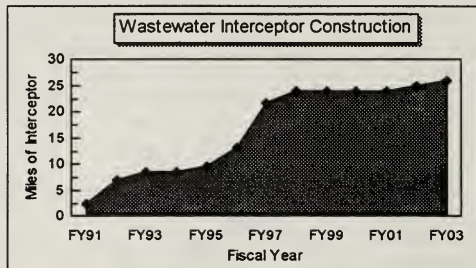


### Interception and Pumping

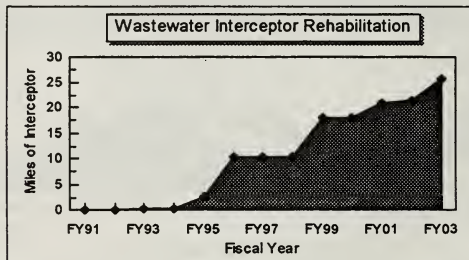
A key aspect of MWRA's goal to provide adequate system capacity and reliable service is the interception and pumping program category, which is comprised of 16 projects whose purpose is to construct new and rehabilitate existing interceptors and pump stations. The average age of MWRA sewer pipes is 75 years, with some pipes older than 160 years. The Sewerage Division is committed to constructing an additional two miles of new interceptor and rehabilitating seven miles of existing interceptor by FY02. The most significant project is the \$157 million Braintree-Weymouth Relief Facilities project which when completed in FY04 will reduce community infiltration and inflow and provide capacity for peak flows in Braintree, Hingham, Holbrook, Randolph, Weymouth, and sections of Quincy. Other major projects include Quincy Pump Facilities (\$20 million), and Framingham Extension Relief Sewer (\$47.4 million). Two other projects are almost complete: the \$31.4 million New Neponset Valley Relief Sewer, and the \$72.5 million Wellesley Extension Replacement Sewer.

Approximately \$38 million in the above project costs is budgeted for five new pump stations. Three are in the Quincy Pump Facilities project: Squantum, Hough's Neck, and Quincy; and two are in the Braintree-Weymouth Relief Facilities project: North Weymouth and Braintree-Weymouth.

### Actual and Projected Miles of Newly Constructed Interceptor



### Actual and Projected Miles of Rehabilitated Interceptor



### Wastewater Treatment

As more DITP facilities become operational, responsibility for capital improvements not directly related to initial start-up will be managed by the Sewerage Division. This CIP includes five new capital projects for DITP, and the transfer of one existing BHP project (Dry Storage Warehouse) to the treatment program category managed by the Sewerage Division.

### CSOs

For the first time, the CIP includes discrete budgets for design and construction subphases for all CSO projects. This reflects the success of the environmental, community, and facilities planning process as the overall program achieves regulatory approvals and moves from planning to design. The CSO Final Facilities Plan and EIR were completed in July 1997, and five additional MWRA- and community-managed projects will begin design in FY98:

- North Dorchester Bay and Reserved Channel Consolidation Conduits and Pumping Facility (\$146.6 million),
- Cambridge and Charlestown Hydraulic Relief (\$3.5 million),
- Boston Interception Connection (\$1.2 million),
- Chelsea Trunk and Branch Sewer Relief and Outfall Improvements (\$28.9 million), and
- BWSC Floatables Control (\$1.1 million).

### *Residuals Management*

\$42.3 million in plant expansion and other improvements at the existing pelletizing plant at Fore River are underway. Completion of Pier 2 rehabilitation, and additional rail tracks and pellet silos (Outside Construction) is scheduled for March 1998, and the completion of two new pelletizing trains and modifications to the four existing trains (Inside Construction) is scheduled for June 1999.

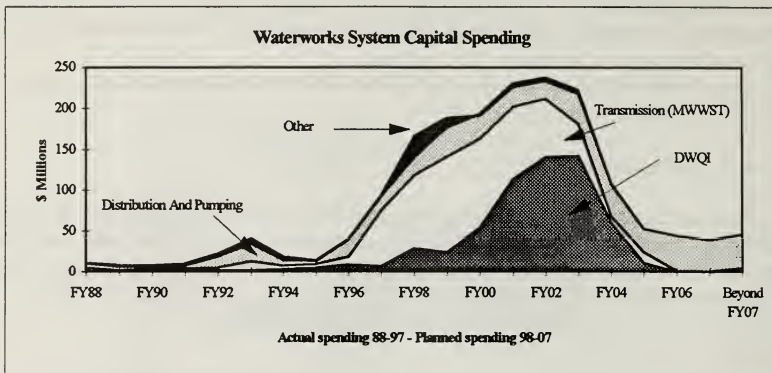
### *I/I Program*

The Infiltration/Inflow Financial Assistance Program (I/I) distributed \$7.3 million in grant and loan funds to 18 different communities in FY97, bringing the total distribution since the program's inception in FY93 to \$34.9 million. Distribution of grants and loans will continue through June 2005, with community repayments complete by June 2010.

### **Waterworks System Improvements**

The waterworks program area consists of 49 projects managed by the Waterworks Division in the four program categories presented below.

Waterworks Program Categories	FY98	FY99	FY00	FY 98-00 Total	FY 01-2007	10-Year Total
Drinking Water Quality Improvements	\$28.4	\$23.7	\$53.6	\$105.7	\$468.5	\$574.2
Transmission	\$90.3	\$117.6	\$109.6	\$317.5	\$219.6	\$537.1
Distribution and Pumping	\$22.6	\$35.3	\$30.0	\$87.9	\$246.1	\$334.0
Other	\$24.7	\$11.9	(\$2.3)	\$34.4	(\$15.0)	\$19.4
Total:	\$165.9	\$188.6	\$190.9	\$545.4	\$919.3	\$1,464.7



### *Drinking Water Quality Improvements*

This program category includes \$411.8 million for the Walnut Hill Water Treatment Plant (WTP) and \$175.2 million for five covered storage facility projects designed to treat and protect drinking water in the MWRA system. The CIP includes a budget for construction of the filtration option for the Walnut Hill WTP, and depending on the outcome of an environmental review process and negotiations with regulatory agencies, may be reduced significantly if chlorination or ozonation options are deemed acceptable as effective first steps in a phased approach to water treatment.

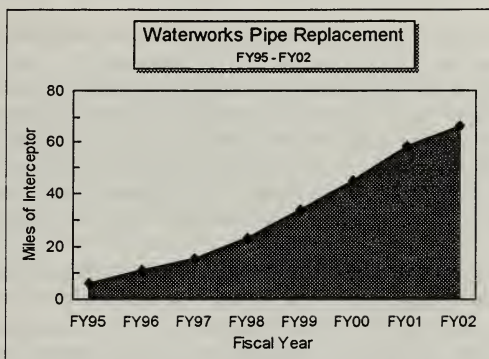
### *Transmission*

Construction of the \$623 million MetroWest Water Supply Tunnel to replace the aging Hultman Aqueduct is underway and scheduled for completion in April 2003. This project combined with the Walnut Hill Water Treatment Plant and additional covered storage facilities comprise the core elements of a long-term integrated plan for improving the reliability and water quality of MWRA's waterworks system.

### *Distribution and Pumping*

This program category is comprised of 31 projects to construct new and rehabilitate existing water pipelines and pumping facilities. The average age of MWRA water pipes is 82 years, with some pipes older than 100 years. MWRA's Business Plan includes an objective to complete 45 miles of waterworks pipeline rehabilitation by FY02.

## Actual and Projected Miles of Waterworks System Pipe Replacement



### *Other Waterworks*

This program includes \$12.6 million for Central Monitoring improvements, \$11.5 for rehabilitation of existing facilities, and \$7.5 million in grants and \$22.5 million in loans for the Local Water Infrastructure Rehabilitation Assistance Program which began disbursement in August 1997.

## **Business Operations and Support**

### *Business Systems Plan*

This \$5.9 million project supports a multi-year plan (FY95-01) for maintaining and improving the management of information and communication systems essential to core financial and business functions of MWRA. Current projects include improvements to the data network and servers, GIS systems, PBX replacement, and the development of new budgeting and contract database applications.

### *FRSA*

The Fore River Staging Area continues operations related to construction on Deer Island, and also serves as the permanent home for the Pelletizing Plant and other MWRA operations. Pending final approval of federal loan guarantees, 130 acres of the total 180 acres of land will be sold in FY98 to Massachusetts Heavy Industries (MHI) for shipbuilding.

### *North Maintenance Facility*

The CIP includes \$6.2 million for improvements to three existing Waterworks and Sewerage division maintenance facilities and \$12.4 million for a new central distribution and maintenance facility to consolidate maintenance operations located north of Boston. A reassessment of the approach for siting and developing the new central facility is underway.

## CONTINGENCY FUNDS

MWRA maintains two Capital Budget Contingency funds for each fiscal year, one for the Boston Harbor Project, and one for all other projects. The funds provide a mechanism to address unanticipated or unpredictable changes associated with capital projects. Transfers from the funds to the budget for a capital project phase can be made at any time during the fiscal year. Such transfers occur when the Executive Director authorizes or the Board of Directors approves either a contract award amount higher than the budgeted figure for a project phase, or change orders and contract amendments that result in costs greater than budgeted. The Rates and Budget Department prepares monthly reports on current and cumulative transfers from the contingency funds.

Both funds were amended during the fiscal year, resulting in all contingency transfers being made within budget. The BHP contingency fund was amended on March 5, 1997 increasing the fund by \$28.1 million from \$26.8 million to \$54.9 million. Contributing to the need for the amendment were contingency transfers for the award of Secondary Battery C (\$14.8 million), litigation support and claims resolution (\$10.8 million), odor and corrosion control modifications and a preventive maintenance plan for Nut Island Headworks (\$6.6 million), change orders related to Secondary Battery A start-up (\$6.6 million), and change orders for the Inter-Island Tunnel (\$6.1 million). The Other Capital Projects contingency fund was amended on May 21, 1997, increasing the fund by \$4.5 million from \$15.1 million to \$19.6 million. Contributing to the need for the amendment were contingency transfers for the award of Rehabilitation of Other Pump Stations (\$2.6 million), Chelsea Relief Sewer Design (\$2.8 million), and an anticipated amendment for CSO Master Planning (\$1.4 million) which was approved after the end of the fiscal year.

## CAPITAL FUNDING AND GRANT REVENUES

### Capital Program Funding

MWRA uses two sources to finance its capital program: proceeds from borrowing and grant funds. Outstanding revenue bonds total \$2.9 billion as of June 30, 1997 including \$175 million in variable rate debt issued in FY97 as a tool for reducing interest costs. MWRA is currently rated an A credit by Standard & Poor's, Moody's, and Fitch. MWRA also borrows from the Commonwealth's Water Pollution Abatement Trust, also known as the State Revolving Loan Fund (SRF). The gross amount of outstanding debt from the SRF as of June 30, 1997, is \$336.6 million. The net amount of outstanding SRF debt, assuming payment of contract assistance by the Commonwealth, is \$263.3 million. In FY95 MWRA initiated a tax-exempt commercial paper program to increase its borrowing flexibility and reduce interest costs. Outstanding commercial paper totaled \$297 million as of June 30, 1997.

MWRA budgets for bond principal and interest payments in its annual Current Expense Budget (CEB). In FY98 the debt service budget is \$178 million, net of \$41 million for debt service assistance from the Commonwealth of Massachusetts. As a result of the long-term financing necessary to fully implement the capital program, MWRA anticipates that annual debt service payments will continue to increase each year at least through 2004.

### Grant Revenues

State and federal grant receipts are also a significant source of funds, estimated to total \$821.8 million through June 30, 1997. The following table presents projected receipts from federal and state construction grant programs, as well as from special federal grant appropriations (including the Section 513 Program), for FY98-00 and beyond. Total grant support is projected to be \$108.7 million or 7.7 percent of expenditures in the three-year budget period.<sup>5</sup>

**Projected Grant Revenue**  
(\$000)

Grant Program	FY 98	FY 99	FY 00	Total FY 98-00	Beyond FY 00
Construction Grants	\$17,727	\$2,832	\$1,097	\$21,656	\$0
Special Federal Grants	55,433	16,501	15,121	87,055	1,825
<b>TOTAL</b>	<b>\$73,160</b>	<b>\$19,333</b>	<b>\$16,218</b>	<b>\$108,711</b>	<b>\$1,825</b>

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<sup>5</sup> Grant receipts and loan fund projections and assumptions are included with the project expenditure forecasts in the back of this document.

After projected FY98-00 grant revenue is subtracted from capital requirements, the amount that MWRA must finance is \$1.3 billion, as shown below.<sup>6</sup>

**Capital Budget Funding Requirement**  
((\$000))

<b>Program Area</b>	<b>Total FY 98-00 Capital Requirements</b>	<b>Projected Grant Receipts</b>	<b>Total FY 98-00 Ratepayer Funding Requirements</b>
Wastewater	\$698,823	\$108,711	\$590,112
Waterworks	545,429	0	545,429
Business and Operations Support	12,163	0	12,163
Contingency	151,095	0	151,095
<b>TOTAL</b>	<b>\$1,407,510</b>	<b>\$108,711</b>	<b>\$1,298,799</b>

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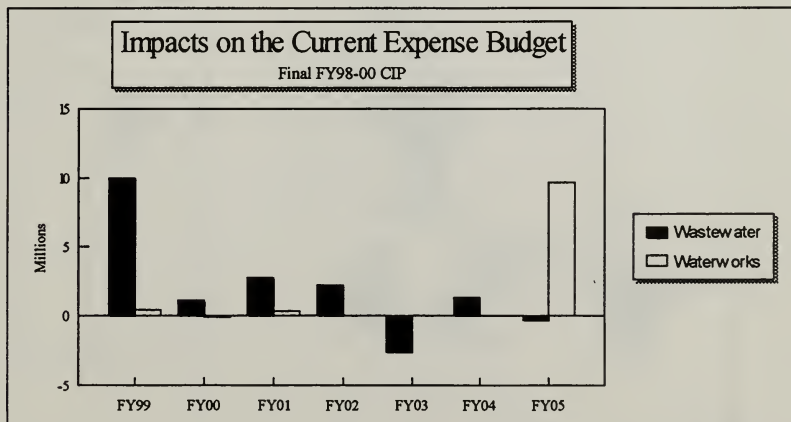
<sup>6</sup> Current MWRA rate planning estimates project the need to borrow \$1.15 billion for the three year period FY98-00. The \$149 million difference between the ratepayer funded requirement in the table above and the rate planning estimate is attributed to adjustments in the planning estimate made for retainage payments for construction contracts and for an assumed capital spending rate of 90% of budget.

## IMPACTS ON THE CURRENT EXPENSE BUDGET

### Impacts of New Operations

In addition to the annual financing costs included in the Current Expense Budget, the Capital Improvement Program affects annual operating budgets when capital facilities come on-line, requiring adjustments to staffing levels and other operating expenses. The project descriptions in this document provide information concerning the projected amount and timing of the CEB impacts for the years beyond FY98.

The following graph summarizes, by program area, the estimated incremental impact of additional operating costs on MWRA's Current Expense Budget from FY99 through FY05. Impacts include savings resulting from capital improvements which will reduce labor, utility, or maintenance costs.



Largest impacts are from Deer Island Treatment Plant operation (FY99) and water treatment plant (FY05). Decrease in FY03 is result of savings in sludge barging costs upon completion of the Braintree-Weymouth Relief Facilities project. When Braintree-Weymouth is complete MWRA will be able to transport sludge for Deer Island to the pelletizing plant at the Fore River Shipyard in Quincy via pipeline.







# Introduction to Wastewater Improvement Program

The Wastewater capital program includes 44 projects divided into the five program categories listed in the table below. Budget Summaries for individual project follow this introduction.

## EXPENDITURE FORECAST BY PROGRAM CATEGORY (in \$ millions):

Program Category	Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
Interception and Pumping	\$430.5	\$188.8	\$242.8	\$26.4	\$12.9	\$41.3	\$46.5	\$59.6	\$49.3
Non-BHP Treatment	32.8	6.7	26.1	3.8	3.9	13.5	3.7	1.2	0
Residuals Management	150.2	125.5	24.7	21.0	3.1	0	.23	.23	.23
CSOs	469.9	39.3	430.7	23.5	33.3	39.8	76.5	72.1	186.6
Other	16.4	25.6	(9.2)	(.79)	(.39)	1.5	1.1	1.3	(12.0)
<b>TOTAL</b>	<b>\$1,099.9</b>	<b>\$384.8</b>	<b>\$715.1</b>	<b>\$74.0</b>	<b>\$52.7</b>	<b>\$96.1</b>	<b>\$128.0</b>	<b>\$134.4</b>	<b>\$223.1</b>

## FIVE LARGEST WASTEWATER CONTRACTS IN FY98 (in \$ millions):

Project Subphase	Total Cost	FY98 Budgeted Spending	Projected Substantial Completion Date
Residuals Management-Inside Construction	\$24.4	\$18.3	Jun 1999
North Met. Trunk Sewer - Construction	15.2	8.8	Jul 1998
North Dorchester Bay (CSO)- Design/CS/RI	26.4	4.7	Mar 2005
Upgrade Exist./Floatables (CSO)-Const. 1	6.9	4.5	Oct 1999
Framingham Ext. Relief Sewer-Const. 3	7.2	3.2	Apr 1998

# Quincy Pump Facilities

**Status:** MWRA staff have completed review of the Hough's Neck Pump Station (HNPS) 90% design submittal, the revised HNPS hydraulic analysis, and the Squantum Pump Station 30% design submittal. Staff expect to complete review of the final risk assessment for contaminated soil remediation by August 1997.

Projected Completion Date: July 2002

Current Phase: Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$20,018	\$4,568	\$15,450	\$733	\$3,438	\$2,982	\$4,175	\$4,122	\$0

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction 5	Will rehabilitate, not replace 30-inch force main.
Construction 6	Will rehabilitate, not replace 30-inch ductile iron portion of force main. Will also use cementitious lining instead of sliplining.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$23,342	\$20,018	(\$3,324)	May 2002	Jul 2002	2 mos.

### Explanation of Changes:

- Change in scope for Construction 5 and Construction 6 to rehabilitate rather than replace 30-inch force main reduced projected costs.
- The two-month schedule delay results from the scope change.

**CEB Impact**

<b>Incremental CEB cost in FY99</b>	<b>Incremental CEB cost in FY00</b>	<b>Incremental CEB cost in FY01</b>	<b>Incremental CEB cost in FY02</b>	<b>Incremental CEB cost in FY03</b>	<b>Description</b>
\$5,327	\$15,976	\$9,134	(\$6,826)	\$650,323	The incremental cost includes electrical operation of the three pump stations; preventive maintenance of instrumentation controls; and onetime start-up expenses for computers and office furniture.

# Braintree-Weymouth Relief Facilities

**Status:** Staff will recommend to the Board in Fall 1997 the most timely and cost effective method for transporting Deer Island sludge from the inter-island tunnel to the pelletizing plant at Fore River shipyard (tunnel or pipeline). MWRA has completed comments on the following submittals: Force Main hydraulic analysis, Barge Loading Facility, 60% Interim Pump Station design, the second draft of the hydraulic analysis for the Relief Pump Station and Interceptors. MWRA review is underway on the following submittals: Replacement Pump Station Value Engineering Report and 2nd draft of the Replacement Pump Station Geotechnical Report, 60% design submittal for Replacement Braintree-Weymouth Pump Station and 90% Tunnel Design. Recent developments in hazardous waste investigations on BECo property may result in re-evaluation of the design. Through June, the consultant has completed 15 geotechnical borings, 15 sediment borings, and 54 sediment analyses as part of the field investigation portion of the marine pipeline evaluation.

Projected Completion Date: April 2004

Current phase: Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$157,109	\$8,056	\$149,053	\$8,568	\$1,241	\$29,144	\$36,303	\$49,697	\$17,333

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction 9	Mill Cove Siphon: New phase for the installation of 1700 linear ft. of 42-inch pipe between Drewell Playground and Aspinwall Street in North Weymouth to act as a second barrel of the existing Mill Cove Siphon, to alleviate overflows upstream until Braintree-Weymouth relief facilities are on line in FY02.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$148,335	\$157,109	\$8,774	Oct 2002	Apr 2004	22 mos.

### Explanation of Changes:

- Cost increased because of new phase for construction of Mill Cove Siphon and inflation cost of other construction phases to December 1997 dollars.
- The schedule was extended 22 months to reflect the decision to complete construction of the Interim Pump Station before the Replacement Pump Station to avoid cost of bypass pumping.

## CEB Impact

Incremental CEB cost in FY02	Incremental CEB cost in FY03	Incremental CEB cost in FY04	Incremental CEB cost in FY05	Description
\$326,365	\$632,729	(\$70,389)	(\$375,142)	Pump station operation and other maintenance items.

# New Neponset Valley Relief Sewer

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**Status:** As of June 1997, all five construction contracts were substantially complete. The relief sewer was placed in service in September 1997.

Projected Completion Date: July 1997

Current Phase: Construction

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$31,439	\$30,157	\$1,282	\$304	\$189	\$0	\$354	\$0	\$435

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## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$31,650	\$31,439	(\$211)	Jul 97	Jul 97	none

## Explanation of Changes:

- The overall project cost decreased due to a change order adjustment to reflect actual spending for Construction 5.
- 

## CEB Impact

None.

# Upper Neponset Valley Relief Sewer

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**Status:** The planning schedule has been extended pending hydraulic evaluation of the downstream impacts of the Neponset Valley Sewer. Resolution is expected in September 2000 upon completion of the Final Facilities Plan as part of the System Master Plan project.

Projected Completion Date: June 2003

Current Phase: Planning

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$2,998	\$0	\$2,998	\$0	\$0	\$0	\$0	\$400	\$2,598

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## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$2,998	\$2,998	\$0	Apr 2004	Jun 2003	(10) mos.

## Explanation of Changes:

- ▶ The overall project completion date was accelerated by ten months in the process of re-scheduling it to commence after completion of the design phase of the System Master Plan Interceptors project.
- 

## CEB Impact

None.

# Wellesley Extension Replacement Sewer

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**Status:** Staff expect award of the final construction contract (Construction 8) in FY2001. Manhole inspection has been completed in one section of the Wellesley Extension Sewer Replacement, but TV inspection has been postponed until access and easement issues are resolved.

Projected Completion Date: March 2004

Current Phase: Construction

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	FY Beyond 02
\$72,480	\$62,215	\$8,265	\$179	\$713	\$281	\$280	\$1,400	\$5,412

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## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$72,105	\$72,480	\$375	Mar 2000	Mar 2004	48 mos.

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## Explanation of Changes:

- Cost increase reflects adjustment for inflation for Construction 8 to December 1997 dollars.
  - Construction of the replacement sewer was substantially complete in April 1992 and the system is fully operational. However, the schedule was extended due to a reassessment of the time necessary to obtain the easements and perform the relining of a segment of the replacement sewer.
- 

## CEB Impact

None.

# Framingham Extension Relief Sewer

**Status:** Construction contracts 1 (Force Main), 2 (Gravity Sewer), and 3 (Pump Station) are underway. Review of design documents for Construction 5 is about 60% complete. Staff made changes to the specifications to incorporate lessons learned during Construction 4 regarding the handling of relining material.

Projected Completion Date: December 2000

Current phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$47,403	\$26,819	20,584	\$6,009	\$3,637	\$7,200	\$3,375	\$363	\$0

## Changes in Scope Since FY97-99 CIP

None.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$52,039	\$47,403	(\$4,636)	Oct 2000	Dec 2000	2 mos.

## Explanation of Changes:

- Construction 3 was awarded for \$4.8 million less than the FY97-99 budget.

## CEB Impact

Incremental CEB cost in FY99	Incremental CEB cost in FY00	Description
\$579,412	\$214,803	Incremental costs include a carbon absorption odor control system at the new Framingham pump station; chemicals required for hydrogen sulfide control along Framingham Extension Sewer; electricity costs for the new pump station; cost of preventive maintenance for instrumentation controls; and one time start-up expenses for computers and office furniture.

# Cummingsville Replacement Sewer

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**Status:** The contract requisition form for Design/CS/RI was approved in January 1997. Staff have incorporated comments from internal reviewers regarding geotechnical and hazardous materials issues in the RFQ/P. Staff revised the RFQ/P in July 1997, and the Notice to Proceed for this contract is scheduled for November 1997.

Projected Completion Date: November 2002

Current Phase: Planning

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$4,430	\$605	\$3,825	\$70	\$200	\$103	\$40	\$2,400	\$1,012

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## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$4,196	\$4,430	\$234	May 2002	Nov 2002	6 mos.

## Explanation of Changes:

- ▶ The cost increase reflects an adjusted for inflation of unawarded contracts to December 1997 dollars.
  - ▶ The schedule was extended by 6 months based on a reassessment of design and construction durations.
- 

## CEB Impact

None.

# North Metropolitan Trunk Sewer - Phase II

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**Status:** Construction began in July 1996. A consultant is assisting MWRA staff with QA/QC inspections for shotcrete and liner on the North Metropolitan Trunk Sewer II construction contract and resolution of problems encountered in the field with the silica fume concrete mixture. A series of trials was set up in June to determine the optimum mixture.

Projected Completion Date: July 1998

Current Phase: Construction

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$15,231	\$5,073	\$10,158	\$8,750	\$1,408	\$0	\$0	\$0	\$0

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## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$20,195	\$15,231	(\$4,964)	Aug 98	Jul 98	(1) mos.

## Explanation of Changes:

- The construction contract was awarded \$5.0 million less than the FY97-99 budget amount.
- 

## CEB Impact

None.

# Siphon Structure Rehabilitation

**Status:** The project remains in the preliminary planning stage. Completion of planning phase is scheduled for April 1998.

Projected Completion Date: December 2003

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$5,661	\$495	\$5,166	\$328	\$30	\$422	\$393	\$152	\$3,841

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Design/CS/RI	New phase for design, engineering, and construction administration costs.
Construction	New phase for construction at 110 sites.
Legal	New phase for legal expenses associated with resolving construction and design issues and claims.
Public Relations	New phase for expenses associated with resolving technical issues with communities and site abutters arising from project implementation.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$671	\$5,661	\$4,990	Jun 99	Dec 2003	54

### Explanation of Changes:

- Four new subphases - Design/CS/RI, Construction, Legal, and Public Relations-were added to the FY98-00 CIP budget. In addition, the number of facilities in the planning scope that require site access improvements has increased from 35 to 83.
- Change in schedule reflects substantial completion of Construction. The FY97 substantial completion date reflected Planning and Land Acquisition only.

### CEB Impact

None.

# Wastewater Metering System Upgrade

**Status:** Progress includes recalibration of metering imprints of several local and community pumping facilities and reinstallation of 12 manhole site meters and metering lines.

Projected Completion Date: December 1998

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$400	\$60	\$340	\$310	\$30	\$0	\$0	\$0	\$0

## Changes in Scope Since FY97-99 CIP

None.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$500	\$400	(\$100)	Jun 97	Dec 98	18 mos.

## Explanation of Changes:

- Construction budget reduced to reflect updated cost estimate for equipment and service and more extensive use of MWRA staff.
- Overall project schedule is extended by 18 months to allow more time for addressing community problems and to overlap with a meter system audit.

## CEB Impact

Incremental CEB cost in FY 99	Incremental CEB cost in FY00	Description
\$25,631	\$25,633	Incremental costs associated with maintaining 25 new meters scheduled to start up by December 1998.

# Ashland Extension Sewer

**Status:** The project remains in a preliminary planning stage. Detailed sewer information from both Framingham and Ashland is required for this project. Staff are working on an estimate of the capacity in the existing Framingham sewers, which is scheduled to be done by the end of September.

Projected Completion Date: March 2004

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$1,005	\$0	\$1,005	\$5	\$0	\$200	\$350	\$300	\$150

## Changes in Scope Since FY97-99 CIP

None.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$1,000	\$1,005	\$5	Aug 2002	Mar 2004	19 mos.

## Explanation of Changes:

- One new subphase - Land Acquisition - was added to the FY98-00 budget, increasing the cost.
- The overall project schedule is extended because of the addition of the Land Acquisition phase. The Planning/Design phase schedule has not changed.

## CEB Impact

None.

# System Master Plan Interceptors

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**Status:** The project remains in the preliminary planning stage. Work has not yet begun on the draft RFQ/P due to its relative importance in the wastewater program and staffing constraints. The schedule has been adjusted accordingly.

Projected Completion Date: May 2007

Current Phase: Planning

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00 FY 01	FY 01	FY 02	Beyond FY 02
\$19,734	\$0	\$19,734	\$0	\$250	\$550	\$550	\$550	\$17,834

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## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$18,409	\$19,734	\$1,325	Mar 2005	May 2007	26 mos.

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## Explanation of Changes:

- ▶ The project costs were inflated to December 1997 dollars.
  - ▶ The overall project schedule has been delayed by 26 months to reflect re-assessment of wastewater project priorities and available resources.
- 

## CEB Impact

None.

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# Corrosion & Odor Control Study

---

**Status:** MWRA awarded the Planning/Study contract in January 1997. Consultants completed inspections in Ashland in June and submitted inspection plans for Framingham and Natick in May and June. Inspections for these towns are in process.

Projected Completion Date: January 1999

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$685	\$142	\$515	\$379	\$164	\$0	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$702	\$685	(\$17)	Feb 98	Jan 99	11 mos.

## Explanation of Changes:

- ▶ The Planning/Study contract was awarded for \$17,000 less than the FY97-99 budget.
  - ▶ The overall project schedule has been extended because of slower than expected start-up for the Planning/Study phase.
- 

## CEB Impact

None.

# Wastewater Facilities Rehabilitation

**Status:** The project remains in the preliminary planning phase. Inventory and Evaluation is scheduled to begin in November 1997.

Projected Completion Date: October 2006

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$3,551	\$0	\$3,551	\$450	\$1,100	\$417	\$700	\$200	\$684

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Inventory and Evaluation	The inventory and evaluation will be performed in a single phase rather than multiple phases.
Design and construction	Modified phase to include design and construction of a prioritized program of work developed during the Inventory and Evaluation phase.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$752	\$3,551	\$2,799	Apr 99	Oct 2006	91 mos.

### Explanation of Changes:

- Overall project budget increased due to scope changes that include the addition of more phases of evaluation, design, and construction. In addition, the project costs were inflated to December 1997 dollars.
- The projected substantial completion date has been extended by more than seven years to reflect revised plans for phased construction at twenty-five facilities.

**CEB Impact**

<b>Incremental CEB cost in FY99</b>	<b>Incremental CEB cost in FY00</b>	<b>Description</b>
\$300,000	\$300,000	The recommendations from each phase of this study may include maintenance projects appropriately funded through the CEB. Also, the level of maintenance and rehabilitation is expected to increase after five years as facilities age.

# West Roxbury Tunnel

---

**Status:** The project remains in the preliminary planning phase. The project has two phases: inspections will be performed by a general contractor during dry weather flows; then, if required based on inspection results, an engineering consultant will evaluate the tunnel condition and develop recommendations.

Projected Completion Date: May 1999

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$323	\$0	\$323	\$50	\$273	\$0	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

N/A

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
N/A	\$323	N/A	N/A	May 99	N/A

## Explanation of Changes:

- New project.
- 

## CEB Impact

None.

# Wastewater Central Monitoring

---

**Status:** The project is in the preliminary planning phase. Construction costs, not currently included in the budget will be developed during the planning phase.

Projected Completion Date: November 1998

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$600	\$0	\$600	\$375	\$225	\$0	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
N/A	\$600	N/A	N/A	Nov 98	N/A

## Explanation of Changes:

- New Project.
- 

## CEB Impact

Potential additional operating costs or savings will be identified during the planning phase.

## Remote Headworks Rehabilitation

---

**Status:** The Emergency Generators contract for Rehab-Construction 3 was awarded in September 1996. The Elevator Rehab-Construction contract is expected to be advertised in August 1997, with a Notice to Proceed in January 1998.

Projected Completion Date: July 1998

Current Phase: Construction

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	FY Beyond 02
\$3,568	\$917	\$2,651	\$2,429	\$222	\$0	\$0	\$0	\$0

---

### Changes in Scope Since FY97-99 CIP

None.

---

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$3,526	\$3,568	\$42	Sep 97	Jul 98	10 mos.

### Explanation of Changes:

- The overall project schedule was extended by ten months to reflect a revised schedule for Elevator-Rehab construction.
- 

### CEB Impact

None.

---

# Boston Harbor Performance Certification

---

**Status:** Phase I has a substantial completion date of October 1997.

Projected Completion Date: August 2001

Current Phase: Phase I

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$1,550	\$426	\$1,124	\$244	\$400	\$130	\$200	\$150	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Total Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$1,500	\$1,550	\$50	Apr 99	Aug 2001	28 mos.

## Explanation of Changes:

- ▶ The overall project budget increased due to the addition of effluent outfall tunnel contract (CP-282) to the Phase III scope.
  - ▶ Overall project schedule is extended by 28 months due to the addition of effluent outfall tunnel to the scope.
- 

## CEB Impact

None.

# Deer Island As-Needed Design/Construction Services/Resident Inspection

---

**Status:** The projected contract notice to proceed is July 1998.

**Projected Completion Date:** June 2000

**Current Phase:** Design

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$500	\$0	\$500	\$0	\$250	\$250	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

N/A

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
N/A	\$550	N/A	N/A	Jun 2000	N/A

## Explanation of Changes:

- New project.
- 

## CEB Impact

None.

# Deer Island Construction Services Contracts

---

**Status:** Deer Island staff have initiated use of the HVAC and Plumbing contracts for several projects.

Projected Completion Date: June 1999

Current Phase: Construction

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	FY Beyond 02
\$1,500	\$0	\$1,500	\$875	\$625	\$0	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

N/A

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
N/A	\$1,500	\$1,500	N/A	Jun 99	N/A

## Explanation of Changes:

- New project.

---

## CEB Impact

None.

# On-Site Generation of Sodium Hypochlorite

---

**Status:** The project remains in the preliminary in-house planning stage.

Projected Completion Date: June 2000

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	FY Beyond 02
\$15,475	\$0	\$15,475	\$0	\$1,400	\$12,600	\$1,475	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

N/A

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
N/A	\$15,475	N/A	N/A	Jun 2000	N/A

## Explanation of Changes:

- New project.
- 

## CEB Impact

Operating costs for the plant beginning in FY01 range from \$1 to \$3 million depending on eventual size of plant and required utility and chemical demands. However, overall implementation of this project will result in operating savings over the useful life of the facility because on-site generation is less expensive than purchasing sodium hypochlorite.

# Deer Island Coastal Protection

---

**Status:** The project remains in the preliminary planning stage. No budget or schedule has been assigned for this project due to the uncertainty of the timing and need for beach restoration, which is entirely dependent on weather events.

Projected Completion Date: To be determined

Current phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru. FY97	Remaining Balance	98	99	00	01	02	Beyond 02
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

N/A

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
N/A	\$0	N/A	N/A	TBD	N/A

## Explanation of Changes:

- New project.
- 

## CEB Impact

None.

# Deer Island Plant-Wide Systems

---

Status: MWRA staff have completed the planning for this project.

Projected Completion Date: May 1999

Current phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$250	\$0	\$250	\$115	\$135	\$0	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

N/A

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
N/A	\$250	N/A	N/A	May 99	N/A

## Explanation of Changes:

- New project.

---

## CEB Impact

None.

# Deer Island Dry Storage Warehouse

---

**Status:** This project has been transferred from BHP Site Facilities Construction to the Sewerage Division. The project remains in the preliminary planning stage, with the design contract set to be awarded in early FY98. Staff continue to refine the scope and cost and estimates will reflect any changes in the Proposed FY99-01 CIP.

Projected Completion Date: March 2002

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$4,200	\$0	\$4,200	\$150	\$450	\$540	\$1,980	\$1,080	\$0

---

## Changes in Scope Since FY97-99 CIP

Project moved from BHP program to Sewerage Division.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$4,196	\$4,200	\$4	Dec 99	Mar 2002	27 mos.

## Explanation of Changes:

- Schedule has been extended to allow more time for planning and design.
- 

## CEB Impact

None.

# Clinton Landfill Liner Repair

---

**Status:** The project remains in the preliminary planning stage. Staff is awaiting decision from Department of Environmental Protection regarding the cause of the leachate problem.

Projected Completion Date: March 1999

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$400	\$0	\$400	\$0	\$400	\$0	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

N/A

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
N/A	\$400	N/A	N/A	Mar 99	N/A

## Explanation of Changes:

- The project was not included in the FY97-99 CIP.
- 

## CEB Impact

None.

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## **BOSTON HARBOR PROJECT**

# Introduction to Deer Island Primary and Secondary Treatment Facilities

## EXPENDITURE FORECAST BY PROGRAM CATEGORY (in \$ millions):

Program Category	Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
Deer Island	\$3,095.9	\$2,638.4	\$457.5	\$206.8	\$171.0	\$75.1	\$4.6	\$0	\$0
Water Transportation System	249.9	224.3	25.6	10.8	7.1	5.2	2.5	0	0
Total	\$3,378.5	\$2,869.4	\$509.2	\$221.5	\$181.9	\$93.9	\$10.7	\$1.2	\$0

## FIVE LARGEST BOSTON HARBOR PROJECT CONTRACTS IN FY98 (in \$ millions):

Project Sub-Phase	Total Cost	FY98 Budgeted Spending	Projected Substantial Completion Date
CM Services	\$249.3	\$31.1	Dec-98
Secondary C Reactor and Clarifier Battery	\$161.6	\$50.9	Dec-99
Inter-Island Tunnel	\$155.7	\$10.5	Nov-97
Effluent Outfall Tunnel	\$255.6	\$9.3	Sep-98
Ancillary DI Mod. III	\$23.0	\$8.5	Jul-99

## INCREMENTAL CEB IMPACTS (\$000):

Category	FY99	FY2000	FY2001	FY2002	FY2003	Description
DI Treatment Plant	\$2,218,455	\$751,141	(\$322,135)	\$387,532	(\$147,052)	Labor, Chemicals, Utilities, Maintenance, Services, and Other Spending
DI Laboratory Facilities	(\$14,932)	\$32,422	\$82,793	\$48,182	\$8,592	Labor, Chemicals, Utilities, Maintenance, Services, and Other Spending

## Site Facilities Construction

---

**Status:** Through June 1997, this phase was 72.3% complete.

**Projected Completion Date:** June 2000

**Current Phase:** Construction

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$233,888	\$171,082	\$62,806	\$11,771	\$37,411	\$10,334	\$3,290	\$0	\$0

---

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$232,949	\$233,888	\$939	Jun 2000	Jun 2000	None

### Explanation of Changes:

- Increased budget is the result of cost adjustments related to inflation in the unit same prices for labor and materials for unawarded contracts Western Shoreline Protection and Final Paving and Site Completion.
- The schedule was extended nine months to reflect the addition of the Shirley Gut Siphon and to complete the notice of project change (NPC) to reduce the amount of protection required along the shoreline. The schedule for Site Prep/ Demolition of Existing Treatment Plant was reduced 9 months to reflect the deletion of scope items from the contract for the demolition of the non-potable water building and cooling tower.

## Pretreatment & Primary Construction

---

**Status:** Through June 1997, this phase was 95.3% complete.

Projected Completion Date: October 1999

Current Phase: Construction

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$697,895	\$650,136	\$47,759	\$35,223	\$8,260	\$4,276	\$0	\$0	\$0

---

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$666,727	\$697,895	\$31,168	Dec 97	Oct 99	22 mos.

### Explanation of Changes:

- ▶ Increased budget primarily reflects odor control modifications for Nut Island Headworks and North Main Pump Station, as well as potential supplemental costs for North Main Pump Station.
- ▶ Concrete Coating/ Repair and Upgrade was adjusted 22 months to allow for the program to be completed in three phases in order to allow for the seasonal application of concrete coatings and to include Nut Island facilities in the scope.

## Secondary Construction

**Status:** Through June 1997, this phase was 78.5% complete. During FY97, the last major contract, Secondary Reactor and Clarifier Battery C, was awarded.

Projected Completion Date: December 1999

Current Phase: Construction

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$928,785	\$726,435	\$202,350	\$81,813	\$77,005	\$43,532	\$0	\$0	\$0

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$901,896	\$928,785	\$26,889	Feb 2000	Dec 99	(2) mos.

### Explanation of Changes:

- ▶ Most of the cost increase is due to an adjustment to the award amount for Secondary Battery C. The remaining increases are due to Secondary Battery A&B which are mostly attributable to the potential costs for the dewatering program to address the ground water infiltration beneath the slab of the secondary reactor and clarifier batteries.
- ▶ Outstanding claim settlements for additional face grouting during mining of the tunnel diffuser section have been transferred to a "BHP Outfall Tunnel claim reserve" in the contingency budget.

# On-Island Residuals Construction

---

**Status:** Through June 1997, this phase was 99.0% complete.

**Projected Completion Date:** July 1997

**Current Phase:** Construction

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$315,107	\$310,122	\$4,985	\$4,985	\$0	\$0	\$0	\$0	\$0

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$311,437	\$315,107	\$3,670	Jun 97	Jul 97	1 mos.

## Explanation of Changes:

- Budget increase resulted from change orders for Residuals Treatment Facility Secondary A & B including: relocation/modification of odor control chutes in the centrifuge discharge piping, electrical odor control review, overflow pipe, centrifuge equipment support, and start up assistance during functional performance testing.

## Permanent Utilities Construction

---

**Status:** Through June 1997, this phase achieved 97.0% physical progress.

Projected Completion Date: October 1999

Current Phase: Construction

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$191,409	\$180,280	\$11,129	\$7,035	\$2,647	\$1,447	\$0	\$0	\$0

---

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$187,064	\$191,409	\$4,345	Oct 99	Oct 99	None

#### Explanation of Changes:

- Budget increase resulted from change orders for the On-Site Power Plant: modifications to the dump condenser and associated potential supplemental costs, additional fuel required to complete boiler testing, heat sink and low pressure system modifications, and digester gas system review.
- The schedule for the On-Site Power plant was extended nine months because of design changes such as the catwalk redesign. These construction related issues impact the fabrication installation and start-up of equipment required for the operation of the thermal requirements of the contract. The change to this schedule did not impact the overall phase completion date.

# Construction Support Services

**Status:** Through June 1997, this phase was 75.7% complete (based on expenditures). Overall completion of these services is dependent on completion of construction contracts these services support.

Projected Completion Date: December 2000

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$85,732	\$64,901	\$20,831	\$10,690	\$5,776	\$3,418	\$947	\$0	\$0

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$75,437	\$85,732	\$10,295	Mar 2000	Dec 2000	9 mos.

## Explanation of Changes:

- ▶ Budget increase resulted primarily from an adjustment to the Construction Power line item to reflect FY97 spending and review of consumption. Fuel Supplier II increase was to adjust the budget to the award amount. Increases in the service fee bid item reflect the reduced quantity demand and shorter contract duration.
- ▶ Completion of Interim Utilities was extended six months to incorporate continued rental of boilers to provide heat for the new plant until the permanent thermal plant is available.

# Construction Management

**Status:** Through June 1997, this phase was 75.3% complete (based on expenditures). Overall completion of these services is dependent on the schedule for completion of construction contracts and the time necessary to resolve outstanding change orders and claims.

Projected Completion Date: December 2004

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$354,898	\$267,244	\$87,654	\$41,368	\$35,960	\$10,003	\$323	\$0	\$0

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$351,338	\$354,898	\$3,560	Dec 2004	Dec 2004	None

## Explanation of Changes:

- Budget increase results from a planned amendment to the Construction Management contract, greater than anticipated expenditures for special consultants primarily to support claims analysis on the Effluent Outfall Tunnel, and the extended duration of several construction contracts including the on-site thermal power plant. Additional funds were added to the outfall administration line item to support the use of the outside counsel for the ongoing defense of the claims related to the Effluent Outfall Tunnel through June 1998.
- Insurance Marine Liability schedule was shortened four years to reflect the MWRA's decision to cancel policy, and incorporate this liability into the MWRA's General Liability Insurance. Outfall Administration was extended an additional year to continue the use of outside legal counsel for the ongoing defense of claims related to the Effluent Outfall Tunnel. Outfall Start-Up was delayed 14 months to adjust for revised end date for the construction contract. This contract begins 6 to 9 months prior to completion of tunnel construction.

## Design Services

---

**Status:** Through June 1997, design was 92.6% complete (based on expenditures). Overall completion of these services is dependent on completion of construction contracts these services support.

Projected Completion Date: June 2000

Current Phase: Design

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$271,655	\$251,677	\$19,978	\$13,957	\$3,903	\$2,118	\$0	\$0	\$0

---

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$265,676	\$271,655	\$5,979	Jun 2000	Jun 2000	None

### Explanation of Changes:

- Increases are for anticipated Engineering Services During Construction amendments for Power and Hydroelectric Plant, On-Island Residuals, Secondary Treatment Facilities, and Nut Island Headworks. These design contracts support active construction contracts.
- Individual design schedule extensions reflect a change in reporting the engineering services during construction completion date instead of design completion, which was previously reported as the phase ending. There was no change to the phase completion schedule.

# Water Transportation

**Status:** Through June 1997, this phase was 89.8% complete (based on expenditures). The duration and need for transportation services to support active construction contracts will determine when these services will be complete.

Projected Completion Date: December 2000

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$249,850	\$224,270	\$25,580	\$10,789	\$7,086	\$5,233	\$2,472	\$0	\$0

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$9,604	\$11,460	\$1,856	Dec 99	Dec 2000	12 mos.

## Explanation of Changes:

- Increase results from incorporation of two previously approved amendments to the Suffolk Downs Lease, and a revised scope to include additional maintenance and dredging. Increases in WTS RO/RO Personnel Transport budget are the result of schedule changes described below.
- Contract durations were adjusted for Bus Transport, RO/RO Transport, and Personnel Transport to provide service through June 2000, with an option for an additional six months to December 2000 as a contingency should additional construction time be necessary. Costs have been updated in the CIP to reflect adjusted service.

## Residual Management Facilities

**Status:** The Inside Construction contract was awarded in December 1996, six months later than planned because of procurement and legal issues. As a result, MWRA will not meet an upcoming court milestone to complete construction and commence operations of facility modifications at FRSA by August, 1997. Projected completion date is now October 1997.

Projected Completion Date: June 1999

Current Phase: Construction

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$51,856	\$27,128	\$24,278	\$20,995	\$3,058	\$0	\$225	\$225	\$225

### Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Conservation Study	New phase: study to determine feasibility of improving energy efficiency and reducing operations costs by the use of conservation.

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$53,527	\$51,856	(\$1,671)	Jun 98	Jun 99	12 mos.

#### Explanation of Changes:

- The Inside Construction contract was awarded for \$3.9 million less than the FY97-99 budget. Other changes include the addition of a Cogeneration Study phase that has a Notice to Proceed date of January 1998.

# CEB Impact

Incremental CEB cost in FY99	Incremental CEB cost in FY00	Incremental CEB cost in FY01	Incremental CEB cost in FY02	Incremental CEB cost in FY03	Description
\$7,176,651	(\$229,443)	\$2,950,154	\$1,367,810	(\$3,772,820)	The incremental cost includes increases in chemicals and utilities, maintenance, and other costs associated with projected increases in sludge volume associated with the commencement of DI Secondary Battery B in February, 1998, DI Secondary C in July 2002; and decreases in utilities and barging costs beginning in FY02 when the Braintree-Weymouth tunnel becomes operational.

## Introduction to Combined Sewer Overflow (CSO) Program

The CSO program category is divided into three phases: MWRA Managed CSOs, Community Managed CSOs, and CSO Planning and Support. MWRA Managed is comprised of nine separate projects, Community Managed is comprised of seven separate projects, and CSO Planning and Support is comprised of multiple contracts related to planning and support services for the CSO program. Each project is summarized in the following section.

Public and regulatory review of the Final Environmental Impact Report (FEIR) for the CSO Program is expected to be completed in October 1997. Water quality determinations by the Department of Environmental Protection (DEP) are necessary to approve the CSO plan and each project.

CIP operating cost impacts for the CSO program category are summarized below, and will be further developed as part of the planning and design phases for individual projects.

<b>Incremental CEB Cost in FY99</b>	<b>Incremental CEB Cost in FY00</b>	<b>Incremental CEB Cost in FY01</b>	<b>Incremental CEB Cost in FY02</b>	<b>Incremental CEB Cost in FY03</b>	<b>Incremental CEB Cost in FY04</b>	<b>Incremental CEB Cost in FY05</b>
\$7,700	\$18,400	\$2,400	\$30,810	\$0	\$1,339,000	\$11,250

# North Dorchester Bay Consolidation Conduit, Reserved Channel Consolidation Conduit, and Reserved Channel Pumping Facility

**Status:** A contract for design, construction administration, and resident inspection services for all three projects, in the amount of \$19.8 million, was executed effective August 11, 1997.

The recommendation in the FEIR not to provide screening at the Reserved Channel Facility is undergoing review and is subject to approval by regulatory and court parties.

Projected Completion Date: March 2005

Current Phase: Planning/Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$146,550	\$0	\$146,550	\$4,711	\$6,986	\$2,881	\$42,047	\$46,834	\$43,091

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Project	This project is comprised of components of three separate FY97-99 CIP projects: In-line Storage Dorchester Brook Conduit, CSO Relocation to Reserved Channel and CSO Treatment Facility, and Consolidation to Screening and Disinfection Facility BOS076-080.
Design/CS/RI	This is a new subphase to perform design and CS/RI services for the three construction contracts.
Construction 1	This is a new subphase for construction of the North Dorchester Bay Consolidation Conduit that was part of the CSO Relocation to Reserved Channel and CSO Treatment Facility project in the FY97-99 CIP.
Construction 2	This is a new subphase for construction of the Reserved Channel CSO Pumping Facility that was part of the CSO Relocation to Reserved Channel and CSO Treatment Facility project in the FY97-99 CIP.
Construction 3	This is a new subphase for construction of the Reserved Channel Consolidation Conduit that was part of the Consolidation to Screening and Disinfection Facility BOS076-BOS080 project in the FY97-99 CIP.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$113,728	\$146,550	\$32,822	Mar 2005	Mar 2005	None

### Explanation of Changes:

- The DEIR included revised cost estimates for site specific geotechnical conditions and other environmental factors which resulted in increased cost estimates for this project. The majority of the increase was attributable to construction contract 1, the North Dorchester Bay Conduit.

---

### CEB Impact

Included in CSO total CEB Impact table at the beginning of this section.

# Stony Brook Screening and Disinfection Facility

**Status:** The proposed screening and disinfection facility was recommended in the DEIR and is included in the FY98-00 CIP, the FEIR has since recommended sewer separation in lieu of treatment. The new recommendation will be reflected in the Proposed FY99-01 CIP, pending review and approval by regulatory and court parties, as well as formal agreement between MWRA and BWSC on project implementation responsibilities and funding. The design phase is scheduled to commence by July 1998.

Projected Completion Date: March 2003

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$19,439	\$0	\$19,439	\$0	\$733	\$898	\$5,577	\$8,637	\$3,594

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Project	This project was created by splitting up the Stony Brook/CAM005/Outfall Improvements Project in the FY97-99 CIP.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$23,920	\$19,439	(\$4,461)	Mar 2002	Mar 2003	12 mos.

## Explanation of Changes:

- Siting constraints have resulted in a requirement for pumping at the Stony Brook pumping facility, which has significantly increased estimated capital and operating costs. However, the overall project cost decreased because of scope change.
- The project schedule is extended one year because of scope changes described above.

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# Cambridge CAM005 Hydraulic Relief, Charlestown BOS017 Hydraulic Relief, Charlestown Branch Sewer Restriction Removal

**Status:** A contract for design, construction administration, and resident inspection services for all three projects, in the amount of \$588,000, was executed effective August 12, 1997.

The recommendation in the Final Environmental Impact Report not to relieve the MWRA interceptor immediately downstream of the the CAM005 dry weather connection and the recommendation for hydraulic relief in lieu of screening and disinfection at BOS017 are under review and are subject to approval by regulatory and court parties.

Projected Completion Date: August 2000

Current Phase: Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$3,539	\$0	\$3,539	\$107	\$181	\$2,861	\$385	\$5	\$0

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Project	The FY97-99 CIP included screening and disinfection facilities to treat CAM005 and BOS017 discharges, as recommended in the 1994 CSO Conceptual Plan. Both recommendations were changed to hydraulic relief in the 1996 DEIR. Removal of the Charlestown Branch Sewer restriction was a new recommendation in the DEIR, tied to the proposed BOS019 storage conduit.
Project	This project was split from the Stony Brook facility and now involves a small hydraulic relief project. The CAM005/BOS017 project was split from the BOS017/BOSO19 screening & disinfection facility project and also now involves a small hydraulic relief project.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$5,897	\$3,539	(\$2,358)	Mar 2002	Aug 2000	(19) mos.

## Explanation of Changes:

- The project cost has decreased because some project components are no longer included in the scope as redefined in the FY98-00 CIP.

- The project schedule has changed because project components have been combined. The schedules for CAM005 and BOS017 are more aggressive than in the FY97-99 CIP, because the scope and complexity of the project components was reduced.
- 

### **CEB Impact**

Included in CSO total CEB Impact table in the beginning of this section.

## Interception Connection (BOS032)

---

**Status:** While relief of the interceptor connection was recommended in the DEIR and is included in the FY98-99 CIP, the FEIR has since recommended to delete this project because sewer separation recently completed by BWSC allows the CSO regulator to be closed and makes the relief project unnecessary. The relief project will be deleted in the Proposed FY99-01 CIP, pending review and approval by regulatory and court parties.

Projected Completion Date: June 2000

Current Phase: Planning

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru 97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$1,149	\$0	\$1,149	\$91	\$528	\$530	\$0	\$0	\$0

---

### Changes in Scope Since FY97-99 CIP

None.

---

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$1,012	\$1,149	\$137	Jun 2000	Jun 2000	None

### Explanation of Changes:

- ▶ The project costs were inflated to December 1997 dollars.
- 

### CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# East Boston Branch Sewer Relief

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**Status:** The design phase of this project is scheduled to begin by March 2000.

Projected Completion Date: September 2005

Current Phase: Planning

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$30,803	\$0	\$30,803	\$0	\$0	\$155	\$1,046	\$1,071	\$28,532

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$35,596	\$30,804	(\$4,792)	Sep 2005	Sep 2005	None

## Explanation of Changes:

- The project budget decreased because of a reduction in the estimated cost for contaminated soil removal.
- 

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# Fort Point Channel Consolidation Conduit, Charlestown BOS019 Storage Conduit

**Status:** The Fort Point Channel and BOS019 projects are scheduled to commence design by July 2002.

**Projected Completion Date:** March 2007

**Current Phase:** Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$16,691	\$0	\$16,691	\$0	\$0	\$0	\$0	\$0	\$16,691

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Project	This project is comprised of components of two separate FY97-99 CIP projects: Screening and Disinfection BOS017 and BOS019, and Storage/Consolidation Conduit BOS072-073.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$8,745	\$16,691	\$7,946	Mar 2007	Mar 2007	None

## Explanation of Changes:

- ▶ The project budget increased because of scope changes described above, adjusted excavation volumes, increased odor control equipment costs, and inflation.

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# Chelsea Trunk Sewer Relief, Chelsea Branch Sewer Relief, Chelsea CHE008 Outfall Improvements

**Status:** A contract for design, construction administration and resident inspection services for all three project components, in the amount of \$3.8 million, was executed on June 18, 1997.

Projected Completion Date: December 2002

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	FY Beyond 02
\$28,857	\$0	\$28,857	\$909	\$878	\$11,316	\$10,966	\$1,322	\$3,467

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction 2	The Chelsea Branch Sewer Relief project has increased in size and scope to include relief of the parallel Revere Extension Sewer.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$6,997	\$28,857	\$21,860	Jun 2001	Dec 2002	18 mos.

## Explanation of Changes:

- ▶ The DEIR included revised cost estimates for site specific geotechnical conditions and other environmental factors which resulted in increased cost estimates for this project. In addition, two new construction subphases were added for existing sewer relining, and costs were inflated to December 1997 dollars.
- ▶ The project schedule is extended because of the scope changes described above.

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# Union Park Detention Treatment Facility

**Status:** The design phase of this project is scheduled to begin by December 1999.

Projected Completion Date: March 2005

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$32,620	\$0	\$32,620	\$0	\$0	\$516	\$1,135	\$1,032	\$29,937

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction	Detailed engineering evaluations during development of the DEIR determined that the proposed treatment facility must be partially integrated into the existing Boston Water and Sewer Commission pumping station. The proposed construction, therefore, will involve work at both facilities. The DEIR recommends that both facilities be operated by one entity, either BWSC or MWRA. MWRA and BWSC have not yet reached a final agreement.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$15,653	\$32,620	\$16,967	Mar 2005	Mar 2005	None

## Explanation of Changes:

- The budget increased because of higher estimates for contaminated soil removal, and inflation of costs to December 1997 dollars.

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# Upgrade Existing CSO Facilities and MWRA Floatables Control

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**Status:** A contract for design, construction administration and resident inspection services for all five facility upgrades and for MWRA floatables control, in the amount of \$2.7 million, was executed on June 30, 1996.

A Notice of Project Change (NPC) was submitted to MEPA in August 1997, describing scope changes related to work that must be conducted off of the existing facility sites to construct new dechlorination systems. The NPC will undergo a public comment period and MEPA decision is expected by mid October 1997. That decision may allow design work as recommended in the NPC to proceed or may require additional information and further MEPA review. Design and construction schedules are therefore dependent on MEPA decisions. A related amendment to the design contract is necessary to incorporate the scope changes and associated increases in design cost.

MWRA has reported to the federal court that certain construction milestones in Schedule Six will not be met because of the scope changes. A final schedule will be developed following completion of MEPA review, and will be incorporated in the FY99-01 CIP.

At the direction of EPA, MWRA is conducting a field study to verify the effectiveness of underflow baffles to remove floatable materials from CSO flow. A final report on the study is due in January 1998 in compliance with Schedule Six. Verified performance of the underflow baffles and EPA acceptance of the technology are necessary to allow design and construction to move forward.

Projected Completion Date: October 1999

Current Phase: Design

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$12,317	\$1,234	\$11,083	\$7,964	\$2,454	\$665	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Total Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$10,952	\$12,317	\$1,365	Sep 2001	Oct 99	(23) mos.

**Explanation of Changes:**

- The budget increased by including the addition of hazardous material handling costs, a variety of safety and process improvements at all three facilities, and inflation of project costs to December 1997 dollars.
  - The overall project schedule has been accelerated by two years to reflect earlier construction of the floatable control component.
- 

**CEB Impact**

Included in CSO total CEB Impact table in the beginning of this section.

# South Dorchester Bay Sewer Separation (Fox Point BOS088-089)

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**Status:** A contract for design services was executed by BWSC in June 1996. A preliminary design report is expected by September 1997. BWSC will execute a separate contract for construction management services by October 1997. Construction is scheduled to begin by November 1998.

Projected Completion Date: September 2007

Current Phase: Design

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$38,337	\$2,287	\$36,050	\$502	\$2,017	\$3,541	\$4,836	\$5,145	\$20,009

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$33,317	\$38,337	\$5,020	Sep 2007	Sep 2007	None

## Explanation of Changes:

- The budget increased because the design award was more than the budget, the construction scope changed to include handling of hazardous materials, and project costs were inflated to December 1997 dollars.

---

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# South Dorchester Bay Sewer Separation (Commercial Point BOS090)

**Status:** A contract for design services was executed by BWSC in June 1996. A preliminary design report is expected by September 1997. BWSC will execute a separate contract for construction management services by October 1997. Construction is scheduled to begin by November 1998.

Projected Completion Date: November 2008

Current Phase: Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	FY 98	FY 99	FY '00	FY 01	FY 02	Beyond FY 02
\$60,586	\$2,446	\$58,140	\$212	\$2,159	\$4,787	\$7,454	\$7,841	\$35,686

## Changes in Scope Since FY97-99 CIP

None.

## Changes to Total Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$54,120	\$60,586	\$6,466	Nov 2008	Nov 2008	None

## Explanation of Changes:

- ▶ The budget increased because of a construction scope change to incorporate handling of hazardous materials, and inflation costs to December 1997 dollars.

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

## Neponset River Sewer Separation (BOS093-095)

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**Status:** Design services are ongoing, primarily through BWSC in-house design efforts. Construction will be completed in three phases, the first of which commenced in April 1996 and was completed in April 1997. The second phase is expected to commence by April 1998.

Projected Completion Date: June 2000

Current Phase: Design

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$9,262	\$323	\$8,939	\$2,896	\$3,996	\$2,047	\$0	\$0	\$0

---

### Changes in Scope Since FY97-99 CIP

None.

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### Changes to Total Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$10,128	\$9,262	(\$866)	Jun 2000	Jun 2000	None

### Explanation of Changes:

- The overall project budget has decreased because a portion of the construction contract is now funded through the System Optimization Plan (SOP) program.

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### CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# Constitution Beach Sewer Separation (BOS002)

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**Status:** A contract for design services was executed by the City of Cambridge in January 1997. A preliminary design report is due in November 1997. Cambridge is presently developing an amendment to the contract to provide additional hydraulic modeling services, which will require a time extension for design services. Construction will be performed in phases, with the first phase scheduled to begin by July 1998.

Projected Completion Date: October 2000

Current Phase: Design

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$9,264	\$114	\$9,150	\$747	\$3,982	\$4,421	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$8,236	\$9,264	\$1,028	Oct 2000	Oct 2000	None

## Explanation of Changes:

- The budget increased because of a construction scope change to incorporate handling of hazardous materials, and inflation of costs to December 1997 dollars.
- 

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# Cambridge CAM002-004 Sewer Separation

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**Status:** A contract for design services was executed by the City of Cambridge effective January 1997. A preliminary design report is due in November 1997. Cambridge is presently developing an amendment to the contract to provide additional hydraulic modeling services, which will require a time extension for design services. Construction will be performed in phases, with the first phase scheduled to begin by July 1998.

Projected Completion Date: January 2000

Current Phase: Design

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$12,577	\$1,001	\$11,576	\$3,496	\$7,454	\$626	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Total Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$11,174	\$12,577	\$1,403	Jan 2000	Jan 2000	None

## Explanation of Changes:

- The budget increased because of a construction scope change to incorporate handling of hazardous materials, and inflation of project cost to December 1997 dollars.
- 

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

# BWSC Floatables Control

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**Status:** Design services are expected to begin in 1998, following completion of an MWRA study on the performance of underflow baffles. The project is subject to the results of the field study and EPA and DEP acceptance of the technology. Projected construction completion date is May 2001.

Projected Completion Date: May 2001

Current Phase: Planning

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## **Expenditure Forecast** (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$1,101	\$58	\$1,043	\$15	\$73	\$675	\$200	\$0	\$0

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## **Changes in Scope Since FY97-99 CIP**

None.

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## **Changes to Project Cost and Schedule**

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$970	\$1,101	\$131	May 2001	May 2001	None

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## **Explanation of Changes:**

- The budget increased because of a construction scope change to incorporate handling of hazardous materials, and inflation of the project costs to December 1997 dollars.
- 

## **CEB Impact**

Included in CSO total CEB Impact table in the beginning of this section.

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# Cambridge Floatables Control

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**Status:** Design services are included in the Cambridge CAM002-004 Sewer Separation contract, which commenced in January 1997. The project is subject to the results of the field study on underflow baffles and EPA and DEP acceptance of the technology. Projected construction completion date is May 2001.

Projected Completion Date: May 2001

Current Phase: Design

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$416	\$0	\$416	\$16	\$39	\$254	\$107	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$369	\$416	\$47	May 2001	May 2001	None

## Explanation of Changes:

- The project budget increased because of a construction scope change to incorporate handling of hazardous materials, and inflation of project cost to December 1997 dollars.
- 

## CEB Impact

Included in CSO total CEB Impact table in the beginning of this section.

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# CSO Planning and Support

**Status:** Work commenced in March 1992 and is scheduled to be completed in March 1998. A Final Conceptual Plan and System Master Plan was completed in 1994, a Draft CSO Facilities Plan and EIR was filed with MEPA in October 1996, and a Final CSO Facilities Plan and EIR was filed with MEPA in August 1997. Following a public comment period, the Secretary of Environmental Affairs and DEP are expected to issue decisions on the Final CSO Facilities Plan and EIR by the end of the October 1997. DEP must issue water quality determinations by December 1997. The determinations are necessary for CSO plan approval by DEP and EPA. Reassessment of appropriate CSO control plans for the Charles River by MWRA and the court parties is also due by December 1997. The ability to implement the CSO plan as recommended in the FEIR is dependent upon certain water quality standards determinations and acceptance of the Charles River plan.

Projected Completion Date: February 2010

Current Phase: Final Plan and EIR Approval

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$46,407	\$31,798	\$14,610	\$1,828	\$1,771	\$3,623	\$2,643	\$186	\$4,559

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Master Planning	Public comments on the DEIR led to a significant increase in level of effort for developing the FEIR. Also, the field study to verify the performance of underflow baffles for controlling floatable materials in CSO was greatly expanded.
Land	The FY97-99 CIP did not include a budget for land acquisition.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$36,265	\$46,407	\$10,142	Feb 2010	Feb 2010	None

## Explanation of Changes:

- The overall project budget increased due to the addition of a Land/Easement phase with a budget of \$12.7 million.

## **CEB Impact**

Included in CSO total CEB Impact table in the beginning of this section.

# **I/I Community Financial Assistance Program**

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**Status:** Phase I of the I/I program is in the loan repayment stage. \$7.3 million of Phase II were funds disbursed to 18 communities in FY97.

Projected Completion Date: June 2010

Current Phase: Repayment

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## **Expenditure Forecast (in \$000s)**

Total Cost	Projected Payment thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$15,937	\$25,141	(\$9,204)	(\$789)	(\$389)	\$1,511	\$1,111	\$1,306	(\$11,954)

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## **Changes in Scope Since FY97-99 CIP**

None.

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## **Changes to Project Cost and Schedule**

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$15,937	\$15,937	\$0	Jun 2006	Jun 2010	48 mos.

## **Explanation of Changes:**

- The project schedule was extended to reflect the most recent plan for disbursement of funds.
- 

## **CEB Impact**

None.





# Introduction to Waterworks

The Waterworks capital program includes 49 projects divided into the four program categories listed in the table below. Budget Summaries for individual project follow this introduction.

## EXPENDITURE FORECAST BY PROGRAM CATEGORY (in \$ millions):

Program Category	Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
Drinking Water Quality Improvements	\$609.8	\$30.8	\$579.0	\$28.4	\$23.7	\$53.6	\$113.6	\$141.0	\$218.7
Transmission	644.7	107.7	537.1	90.3	117.6	109.6	88.0	70.5	61.1
Distribution and Pumping	463.0	88.0	374.9	22.6	35.3	30.0	28.4	26.6	232.0
Other	32.7	13.1	19.6	24.7	11.9	(2.3)	(4.5)	(4.5)	(5.8)
<b>TOTAL</b>	<b>\$1,750.1</b>	<b>\$239.6</b>	<b>\$1,510.5</b>	<b>\$165.9</b>	<b>\$188.6</b>	<b>\$190.9</b>	<b>\$225.5</b>	<b>\$233.6</b>	<b>\$506.0</b>

## FIVE LARGEST WATERWORKS CONTRACTS IN FY98 (in \$ millions):

Project Subphase	Total Cost	FY98 Budgeted Spending	Projected Substantial Completion Date
MWWST-Middle Tunnel Segment (CP2)	\$253.1	\$34.1	Feb 2003
MWWST-Western Tunnel Segment (CP1)	144.5	21.4	Apr 2003
MWWST-Weston Tanks (CP8)	46.1	11.5	Nov 2000
Walnut Hill WTP-Design/ESDC	24.8	9.3	Dec 2003
MWWST-Shaft 5A Horizontal Bore (CP3)	12.0	7.7	Feb 1999

# Walnut Hill Water Treatment Plant

**Status:** Through June 1997, 30 % design on three treatment plant options was completed. An ongoing assessment with DEP and EPA continues to determine the most cost effective approach to meeting water quality standards. A decision is anticipated in fall 1997.

Projected Completion Date: May 2004

Current Phase: Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$411,817	\$12,886	\$398,931	\$11,674	\$5,654	\$46,802	\$87,237	\$113,237	\$134,327

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Open Reservoir Water Quality Study	New phase.
AWWARF Red Water Control Strategy Study	New phase to fund MWRA's participation with American Water Works Association Research Foundation in a national study to examine treatment evaluation of bacteria regrowth techniques.
Distribution Water Quality Study	Deleted.
Permit Fees	Renamed phase from DEP Fees to Permit Fees.
WTP Design/ESDC	Removed work associated with resident inspection and changed phase name from Design/CA/RI to Design/ESDC. Added Task 8 work and interim disinfection facility to this scope.
WTP Construction	Removed work associated with the Cosgrove Aqueduct and replaced on-site residuals disposal with direct sewer discharge.
Construction Management/RI	Expanded the scope for construction management support to include full construction management and resident inspection.
Construction Interim Disinfection Facility	New phase Shaft A to construct an interim disinfection facility at Cosgrove.
Norumbega Covered Storage: Preliminary Design, Design/CA/RI, Construction, Land, Appraisal	All contracts associated with developing the Norumbega Covered Storage Facility are included as a separate project in the Drinking Water Quality Improvements program category.

Interim Corrosion Control: Design/CA/RI, Construction Wachusett, Construction Northboro	Moved the ICC Facility to the completed projects section in the Drinking Water Quality Improvements program category.
--	---

#### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$394,694	\$411,817	\$17,123	Dec 2003	May 2004	5 mos.

#### Explanation of Changes:

- Revised cost estimates incorporating \$10 million reduction for discharge of water residuals and \$2.5 million reduction for the elimination of Cosgrove improvements, offset by \$23 million in inflation to escalate cost to December 1997 dollars.
- Schedule delay reflects EPA disinfection by-product rule regulatory delay.

#### CEB Impact

The estimated annual cost of operating the water treatment plant and corrosion and disinfection facilities ranges from \$5 million to \$10 million depending on the ultimate treatment option determined for Walnut Hill Water Treatment Plant. The initial year of CEB spending will be FY04. A detailed estimate of the operations and maintenance costs for the new plant will be developed in the design phase.

Incremental CEB cost in FY99	Incremental CEB cost in FY00	Description
\$136,863	(\$2,294)	Additional chemicals for the operation of interim disinfection somewhat offset by a reduction in services for elimination immediate disinfection service contract.

# Quabbin Water Treatment Plant

**Status:** Through June 1997, 30% design was complete with 60% design scheduled for completion in October 1997. Construction is anticipated to begin in August 1998.

Projected Completion Date: July 2000

Current Phase: Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$5,708	\$612	\$5,096	\$573	\$2,085	\$2,235	\$203	\$0	\$0

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction	Instead of the construction of one facility, construction of two disinfection facilities, one located upstream and the other located downstream.
Nash Hill Covered Storage: Preliminary Design, Design/CA/RI, and Construction	Now a separate project in the Drinking Water Quality Improvements program category.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$4,563	\$5,708	\$1,145	Jul 2000	Jul 2000	None

### Explanation of Changes:

- Increased construction cost estimate incorporating two locations for chemical input to ensure improved water quality.
- Minor schedule delays in design are not expected to change the construction schedule.

## CEB Impact

The estimated annual cost of operating the corrosion control and disinfection facility is currently estimated at \$470,000. The initial year of CEB spending will be FY01. An estimate of the operations and maintenance cost with full automation for the new facility will be developed during the design phase.

# Watershed Protection

**Status:** The final report on the Sudbury Reservoir Protection Study has been completed and MWRA payments for construction of the Holden and West Boylston sewer have commenced. It is expected the final payments for the sewer project will be made in June 2000.

Projected Completion Date: June 2000

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$8,602	\$2,102	\$6,500	\$3,000	\$2,500	\$1,000	\$0	\$0	\$0

## Changes in Scope Since FY97-99 CIP

None.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$8,592	\$8,602	\$10	Jun 2000	Jun 2000	None

## Explanation of Changes:

- Slight increase in cost the result of minor changes made by the consultant to the final Sudbury Reservoir Protection Study Report.

## CEB Impact

None.

# Norumbega Covered Storage

---

**Status:** The notice to proceed for design remains scheduled for December 1997. On May 14, 1997 the Town of Weston voted not to authorize the sale of town land to MWRA for construction of the facility. Authorization of land acquisition is being sought via state legislation.

Projected Completion Date: August 2004

Current Phase: Planning/Design

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$111,133	\$1,882	\$109,251	\$736	\$1,125	\$1,354	\$25,693	\$27,249	\$53,094

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$103,266	\$111,133	\$7,867	Aug 2004	Aug 2004	None

## Explanation of Changes:

- Construction estimate inflated to December 1997 dollars.
  - Land purchase continues to be the critical path. Currently the only phase with a major schedule change is the land acquisition. Other schedule changes may be necessary depending on the resolution of the land issue.
- 

## CEB Impact

The preliminary estimated annual cost of maintaining the quality and quantity of the open Norumbega Reservoir for emergency use after it is taken off-line is approximately \$82,000. An estimate of the operations and maintenance costs for the new covered storage facility will be developed in the design phase. Initial CEB spending for both impacts will begin in FY05.

# Nash Hill Covered Storage

---

Status: MWRA has completed 100% design and advertised the construction contract.

Projected Completion Date: October 1999

Current Phase: Construction

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$14,929	\$886	\$14,043	\$5,737	\$6,228	\$2,078	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction	Added yard piping for operational flexibility and to increase system reliability; expanded electrical and instrumentation to automate operations; added a single baffle in each tank to optimize flow and resultant water quality; and revised storm water and overflow drainage to be on-site.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$11,869	\$14,929	\$3,060	Oct 99	Oct 99	None

---

## Explanation of Changes:

- Minor cost changes associated with a design amendment in addition to increase in construction costs which reflect change in scope and inflation.
- 

## CEB Impact

None.

# Blue Hills Covered Storage

Status: MWRA has awarded the preliminary design/environmental impact report contract and preliminary work has begun.

Projected Completion Date: March 2005

Current Phase: Preliminary Design/EIR

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$27,700	\$81	\$27,619	\$356	\$331	\$83	\$490	\$492	\$25,867

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
DEP/Permit Fees	New phase required to pay the cost of permitting fees. Used to isolate cost and better explain overall budget.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$21,540	\$27,700	\$6,160	Mar 2005	Mar 2005	None

## Explanation of Changes:

- The award amount for preliminary design/EIR was greater than budget due to the need for additional consulting resources to address environmental complexities associated with locating the facility within the Blue Hills reservation.
- Increased construction costs reflect new engineering estimate based on information gleaned from the 100% design estimate prepared for the Fells Reservoir.

## CEB Impact

None.

## Bear Hill Covered Storage

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**Status:** This project remains in the preliminary in-house planning stage.

Projected Completion Date: December 2011

Current Phase: Planning

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$5,419	\$0	\$5,419	\$0	\$0	\$0	\$0	\$0	\$5,419

---

### Changes in Scope Since FY97-99 CIP

None.

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### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$5,356	\$5,419	\$63	Dec 2011	Dec 2011	None

### Explanation of Changes:

- Construction cost estimates are inflated to December 1997 dollars.
- 

### CEB Impact

None.

## Fells Covered Storage

**Status:** Construction commenced on this facility with a notice to proceed in March 1997. By the end of FY97 all rock excavation was complete and concrete tank replacement had begun.

Projected Completion Date: May 1999

Current Phase: Construction

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$16,020	\$3,896	\$12,124	\$6,326	\$5,798	\$0	\$0	\$0	\$0

### Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction-Fells Reservoir	Added 1600 linear feet of new 36-inch water mains to replace 50- and 100-year old cast iron mains.

### Changes to Total Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$16,748	\$16,020	(\$728)	May 99	May 99	None

### Explanation of Changes:

- The construction contract award was \$1.6 million less than budget. This reduction was offset by increased costs related to the change in scope.

### CEB Impact

None.

# MetroWest Water Supply Tunnel

**Status:** In March, 1997, three of four major tunnel construction contracts and the Loring Road tank construction have been awarded. Western Tunnel Segment (CP- 1) was awarded significantly under budget. The project remains on schedule with minor delays associated with the Middle Tunnel Segment (CP-2). The projected substantial completion date remains the same.

Projected Completion Date: July 2005  
(Beneficial use of the MetroWest Tunnel can occur in October 2003)

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$623,063	\$95,301	\$527,762	\$89,877	\$117,012	\$109,470	\$85,856	\$68,232	\$57,315

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Western Tunnel Segment - CP1	Changed name from Construction Contract 1. Added a cost allowance for tunnel excavation through Bloody Bluff, moved work associated with the Hultman Aqueduct fault zone connections to CP6, and moved work associated with pressure testing and disinfecting the tunnel to CP7.
Middle Tunnel Segment - CP2	Changed name from Construction Contract 2.
Eastern Tunnel Segment - CP3	Changed name from Construction Contract 3. Moved work associated with the Weston Covered Storage Tanks to CP8. CP3 broken into two contracts: 3 (excavation of Shaft 5A) and 3A (Shaft 5A to the "WYE" onto Shaft W. Design/ESDC contract includes geotechnical and contract repackaging work related to the reconfiguration of the Eastern Tunnel Segment Contract.)
Surface Work -CP4	Changed name from Construction Contract 4.
MHD Salt Sheds - CP5	Changed name from Construction Contract 5.
Hultman Interconnection/ Inspection - CP6	New phase. Formerly part of CP1.
Testing & Disinfection - CP7	New phase. Formerly part of CP1.
Weston Covered Storage Tanks-CP8	New phase. Formerly part of CP3. Moved rehabilitation of 4,100 linear feet of 60-inch pipe and four master meters from WASM 4 Construction Weston Aqueduct Terminal Chamber and Master Meters.
Construction Management	CM scope expanded to include continuous noise monitoring (MEPA Certificate), addition of licensed site professional, and an early warning observation well to detect the presence of hazardous materials.

Weston MOA	New phase.
Southborough MOA	New phase.

---

#### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$637,025	\$623,063	(\$13,962)	Feb 2006	Jul 2005	(7) mos.

#### Explanation of Changes:

- ▶ The award of the Western Tunnel Segment (CP-1) for \$16 million less than budgeted resulted in a significant decrease in the construction costs somewhat offset by \$1.3 million additional MOA costs and increases to Design/EIR-Tunnel/ESDC reflect geotechnical and contract repackaging work.
  - ▶ The minor schedule changes are a result of contract repackaging and scope adjustments.
- 

#### CEB Impact

None.

# Dam Control Valve Replacement

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**Status:** Wachusett valve replacement is complete, Sudbury valve replacement construction is scheduled to begin in December 1997.

Projected Completion Date: July 1998

Current phase: Construction

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$1,870	\$1,072	\$798	\$330	\$468	\$0	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$1,829	\$1,870	\$41	Feb 98	Jul 98	5 mos.

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## Explanation of Changes:

- ▶ The construction cost estimate for the Sudbury valves replacement has been inflated to December 1997 dollars.
  - ▶ The schedule was delayed for 5 months based on a reassessment of resources and time necessary to complete the scope.
- 

## CEB Impact

None.

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# Sluice Gate Rehabilitation

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**Status:** The conceptual design report has been completed. An RFP and scope of service is being defined.

Projected Completion Date: September 2002

Current Phase: Construction

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$7,599	\$3,551	\$4,048	\$10	\$123	\$123	\$1,896	\$1,896	\$0

---

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction - Sudbury Toe Drain Repair	New phase. The required work for the Toe Drain is substantially complete.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$5,931	\$7,599	\$1,668	Aug 2003	Sep 2002	(11) mos.

---

## Explanation of Changes:

- The phase for construction of the Sudbury Toe Drain was added which accounts for \$1.4 million of the increase. The remainder is Phase 2 inflated to December 1997 dollars.
  - The schedule is accelerated by one year based on a reassessment of the scope and schedule. This schedule will be reassessed during the FY99-00 CIP budget process.
- 

## CEB Impact

None.

# Metropolitan Tunnel Loop

**Status:** This project remains in the preliminary in-house planning stage. Staff work is expected to commence in the spring of 2000. Total project cost reflects only study costs.

Projected Completion Date: December 2002

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$222	\$0	\$222	\$0	\$0	\$0	\$12	\$140	\$70

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Feasibility Study/Survey	The scope of the study has been expanded to consider the southern as well as the northern portion of the tunnel loop.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$214	\$222	\$8	Dec 99	Dec 2002	36 mos.

## Explanation of Changes:

- ▶ The estimated project cost has been inflated to December 1997 dollars.
- ▶ The three year schedule delay reflects the additional time necessary to define the study parameters and overall project need.

## CEB Impact

None.

## Chicopee Valley Aqueduct Interconnections

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**Status:** This project remains in the preliminary in-house planning stage. Staff work is expected to commence in the summer of 1999.

Projected Completion Date: November 2004

Current phase: Planning

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### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$4,150	\$0	\$4,150	\$0	\$0	\$0	\$231	\$231	\$3,688

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### Changes in Scope Since FY97-99 CIP

None.

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### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$4,216	\$4,150	(\$66)	Oct 2004	Nov 2004	1 mos.

### Explanation of Changes:

- ▶ The construction and design estimates are inflated to December 1997 dollars.
- 

### CEB Impact

None.

# Winsor Dam Hydroelectric

**Status:** MWRA filed two preliminary progress reports with the Federal Energy Regulatory Commission, one in November 1996 and May 1997. Total project cost does not include construction.

Projected Completion Date: October 1999

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$85	\$0	\$85	\$42	\$30	\$13	\$0	\$0	\$0

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Preliminary Permit Studies	New phase.
Licensing & Detail Design	New phase.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
N/A	\$85	N/A	N/A	Oct 99	N/A

## Explanation of Changes:

- New project.

## CEB Impact

In FY98 MWRA will hire a consultant to assist with the preliminary study to address economic impacts, potential increased revenues, and the capacity for more power generation.

# Valve Replacement

**Status:** The first construction phase was completed. MWRA continues to replace valves using both in-house staff and with contractor assistance.

Projected Completion Date: June 2006

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$12,026	\$1,146	\$10,880	\$1,195	\$1,368	\$1,225	\$1,394	\$1,225	\$4,473

## Changes in Scope Since FY97-99 CIP

Phase	Change
Line Stops FY96	Removed purchase of mainline valves for FY96 since they were either taken from existing inventories or purchased through the CEB.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$12,082	\$12,026	(\$56)	Jun 2006	Jun 2006	None

## Explanation of Changes:

- ▶ CIP offset by the slight decrease due to eliminating some valve purchases from the construction and design estimates have been inflated to December 1997 dollars.

## CEB Impact

None.

# Cathodic Protection of Distribution Mains

---

**Status:** MWRA has created a cathodic protection system database with data on 230 existing test stations and completed a pilot program testing all stations and anodes.

Projected Completion Date: June 2001

Current Phase: Planning

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	98	99	00	01	02	Beyond FY02
\$221	\$109	\$112	\$48	\$0	\$32	\$32	\$0	\$0

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## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Total Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$214	\$221	\$7	Jun 2000	Jun 2001	12 mos.

## Explanation of Changes:

- The schedule is extended one year to allow for additional monitoring at MWRA cathodic protection sites to evaluate existing systems.
- 

## CEB Impact

None.

# Boston Low Service Pipe and Valve Rehabilitation

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**Status:** Design of the Clinton Road and Boylston Street components were substantially completed with construction scheduled to begin next fiscal year. The second phase of construction (Beacon Street lines) is scheduled to begin in 2005.

Projected Completion Date: April 2007

Current Phase: Design

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$25,718	\$1,690	\$24,028	\$791	\$4,075	\$3,415	\$0	\$0	\$15,747

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$24,056	\$25,718	\$1,662	Apr 2007	Apr 2007	None

---

## Explanation of Changes:

- The construction cost changes are primarily a result of new cost estimates and inflation of estimates to December 1997 dollars.
- 

## CEB Impact

None.

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# Rehabilitation of Weston Aqueduct Supply Mains (WASM) 1 and 2

**Status:** MWRA awarded the planning and design contract for the first phase in May.

**Projected Completion Date:** May 2008

**Current Phase:** Planning/Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$33,292	\$41	\$33,251	\$496	\$531	\$7,419	\$7,684	\$99	\$17,022

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Easements	Changed name from land acquisition.
Construction Commonwealth Ave WASM 2	Reduced the rehabilitation of 6,000 linear feet of 60-inch pipe to 5,800 linear feet and moved to WASM 4 Construction Contract 3 to coordinate with the City of Newton Paving. Increased installation of 1,000 linear feet of 48-inch pipe to 1,200 linear feet and moved to Construction Commonwealth Ave & Centre St WASM 1 & 2. This phase has been absorbed by the two above mentioned phases.
Construction - Commonwealth Ave & Centre St Phase A	Added rehabilitation of 1,200 linear feet of 48-inch pipe from the Construction Commonwealth Ave WASM 2 Phase (construction contract 2). Changed the name from Construction Commonwealth Ave WASM 1 & 2 to Construction Commonwealth Ave & Centre St Phase A
Construction Newton & Brighton Phase B	Changed the name from Construction Newton & Brighton to Construction Newton & Brighton Phase B.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$35,728	\$33,292	(\$2,436)	Feb 2008	May 2008	3 mos.

## Explanation of Changes:

- The construction cost changes are a result of several factors: (1) moved work to contract 3 of WASM 4 project to correspond with the City of Newton's paving plans, (2) repackaged existing contracts, and (3) inflated all construction estimates to December 1997 dollars.

- The schedule is extended three months to accommodate the repackaged scopes.
- 

### **CEB Impact**

None.

# Nonantum Road Pipe Rehabilitation

**Status:** The Nonantum Road Pipeline project was completed in FY97, and the pipeline returned to service in May 1997.

Projected Completion Date: May 1997

Current Phase: Completed

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$2,136	\$2,136	\$0	\$0	\$0	\$0	\$0	\$0	\$0

## Changes in Scope Since FY97-99 CIP

None.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$2,026	\$2,136	\$110	Mar 97	May 97	2 mos.

## Explanation of Changes:

- The construction cost increased less than 2% from the FY97-99 CIP amount as a result of change orders.

## CEB Impact

None.

# Warren Cottage Line Rehabilitation

---

**Status:** Conceptual design, which will be completed by in-house staff, is scheduled to begin in August 1997.

Projected Completion Date: November 2001

Current Phase: Planning

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	98	99	00	01	02	Beyond FY 02
\$1,596	\$0	\$1,596	\$0	\$0	\$7	\$1,094	\$495	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$1,485	\$1,596	\$111	Jul 2001	Nov 2001	4 mos.

## Explanation of Changes:

- ▶ Construction cost estimates were inflated to December 1997 dollars.
  - ▶ The projected completion date is extended four months with the addition of a concept design phase. Prior CIP budgets did not include all the steps required for design.
- 

## CEB Impact

None.

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## Southern Service Improvements

**Status:** The design for the Hyde Park Yard Piping is substantially complete, completing the design for the final phase of this project.

Projected Completion Date: August 2000

Current Phase: Construction

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$14,056	\$9,032	\$5,024	\$327	\$1,629	\$2,626	\$442	\$0	\$0

### Changes in Scope Since FY97-99 CIP

Phase	Change\Explanation
Construction - Hyde Park Ave Yard Piping	Deleted this phase since the work is included in the Rehabilitation of Other Pump Stations project.
Construction - Hyde Park Pipeline	Changed installation of 7,500 linear feet of new 30 - to 36-inch pipe to 7,100 linear feet of new 36-inch pipe.
Easements - Hyde Park Pipeline	New phase.
Hyde Park Pipeline Permit/Road Restoration	New phase.

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$12,623	\$14,056	\$1,433	Mar 2002	Aug 2000	(19) mos.

#### Explanation of Changes:

- Construction cost estimates were inflated to December 1997 dollars.
- The overall change in project schedule is a result of removing the Hyde Park Avenue Yard Pipe to a different CIP project.

CEB Impact

Incremental CEB cost in FY99	Description
\$42,000	The new automated pump stations no longer require on-site personnel. However, routine maintenance will need to be performed by work crews traveling from facility to facility. Therefore additional transportation costs will be incurred.

# Heath Hill Road Pipe Replacement

**Status:** MWRA awarded the contract for construction of Sections 19, 58, and 20 in May 1997.

**Projected Completion Date:** September 2003

**Current Phase:** Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$16,297	\$1,786	\$14,511	\$3,424	\$3,336	\$258	\$277	\$2,916	\$4,300

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction Sections 19, 20, & 58	Deleted work associated with the valve chamber and added approximately 1,100 joint seals.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$14,279	\$16,297	\$2,018	Mar 2003	Sep 2003	6 mos.

## Explanation of Changes:

- The contract award for construction of Sections 19, 58 and 20 was \$1.4 million higher than the FY97-99 CIP budget; the cost of rehabilitation of Section 52 was inflated to December 1997 dollars; and change orders to the new construction for Section 52.
- Design revised to address confined space entry concerns and improve construct ability in congested streets causing a slight schedule delay.

## CEB Impact

None.

# Southern Spine Distribution Mains

---

**Status:** This project remains in the preliminary in-house planning stage.

Projected Completion Date: November 2009

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	98	99	00	01	02	Beyond FY02
\$38,173	\$0	\$38,173	\$0	\$0	\$58	\$699	\$739	\$36,677

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Total Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$35,861	\$38,173	\$2,312	Nov 2009	Nov 2009	None

## Explanation of Changes:

- ▶ Cost increase reflects inflation to December 1997 dollars.
- 

## CEB Impact

None.

## Southern Extra High - Sections 41, 42, and 74

Status: MWRA awarded the contract for the design of Sections 41, 42 and 74 in February 1997.

Projected Completion Date: February 2002

Current Phase: Design

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$8,358	\$52	\$8,306	\$208	\$209	\$255	\$3,863	\$3,771	\$0

### Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Design/CS/RI and Construction	Changed replacement of 8,300 linear feet of 24-inch pipe on Sections 41 & 42 to 8,000 linear feet; and changed the replacement of 900 linear feet of 24-inch pipe and the rehabilitation of 5,300 linear feet of 24-inch pipe on Section 74 to the replacement of 2,700 linear feet of 24-inch pipe and the rehabilitation of 6,400 linear feet of 20-inch pipe on Section 74.
Easements	Changed sub-phase name from Land.

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$2,746	\$8,358	\$5,612	Feb 2002	Feb 2002	None

### Explanation of Changes:

- The contract award for design of Sections 41, 42 and 74 was \$1.1 million greater than the FY97-99 CIP budget. In addition, scope enlarged significantly as described above.

### CEB Impact

None.

# Chestnut Hill Connecting Mains

---

**Status:** This project remains in the preliminary in-house planning stage.

Projected Completion Date: December 2007

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$9,041	\$0	\$9,041	\$0	\$194	\$260	\$22	\$90	\$8,475

---

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Design/CA/RI and Construction	Added work to design and construct the sliplining of the Cochituate Aqueduct. Portions of this work were originally in the New Connecting Mains Shaft 7 to WASM 3 Project.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$3,761	\$9,041	\$5,280	Jan 2006	Dec 2007	23 mos.

### Explanation of Changes:

- ▶ The increase cost is associated with Cochituate sliplining and an additional 9,000 feet of 48-inch pipe.
  - ▶ The schedule was extended by two years because of enlarged scope described above.
- 

### CEB Impact

None.

# Newton Service Improvements

---

**Status:** MWRA completed 100% design of Oak Hill Sections 95 and 100 with in-house resources. Construction scheduled is for award in the fall of 1997.

Projected Completion Date: September 1999

Current Phase: Final Design

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$7,719	\$61	\$7,658	\$3,349	\$3,978	\$331	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$7,455	\$7,719	\$264	May 99	Sep 99	4 mos.

## Explanation of Changes:

- The construction cost estimate for Sections 95 and 100 was inflated based on the actual rather than projected ENR index to December 1996 dollars because it is scheduled for award in FY98.
- 

## CEB Impact

None.

# Commonwealth Avenue Pump Station Modernization

**Status:** The bids for the design of Phase 2 were received in March with construction expected to commence in the fall of 1997.

Projected Completion Date: October 1999

Current Phase: Final Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$6,978	\$1,283	\$5,695	\$2,101	\$2,712	\$882	\$0	\$0	\$0

## Changes in Scope Since FY97-99 CIP

None.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$7,393	\$6,978	(\$415)	May 99	Oct 99	5 mos.

## Explanation of Changes:

- The estimate of Phase 2 construction cost was inflated based on the actual rather than projected ENR index to December 1996 dollars offset by slight decrease in the base cost.

## CEB Impact

Incremental Cost in FY00	Description
\$25,000	Estimated cost for preventive maintenance.

# Lexington Street Pump Station Rehabilitation

---

**Status:** Substantial completion of construction is expected in the fall of 1997.

Projected Completion Date: October 1997

Current Phase: Construction

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	98	99	00	01	02	Beyond FY02
\$3,451	\$3,054	\$397	\$397	\$0	\$0	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$3,170	\$3,451	\$281	Oct 97	Oct 97	None

## Explanation of Changes:

- The project cost increase is associated with change orders required to complete the pump station rehabilitation.
- 

## CEB Impact

Incremental Cost in FY99	Description
\$42,000	The new automated pump stations no longer require on-site personnel. However, routine maintenance will need to be performed by work crews traveling from facility to facility. Therefore, additional transportation costs will be incurred.

# Rehabilitation of Other Pump Stations

**Status:** MWRA awarded the design contract for the Belmont, Hyde Park, Brattle Court, Reservation Road, and Spring Street pump station in April.

Projected Completion Date: November 2004

Current Phase: Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$13,727	\$482	\$13,245	\$492	\$839	\$1,258	\$1,279	\$3,148	\$6,229

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction	Separated construction into four phases.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$8,646	\$13,727	\$5,081	Sep 2003	Nov 2004	14 mos.

## Explanation of Changes:

- The award for design was \$2.6 million more than the FY97-99 CIP budget primarily because of the addition of design of interim automation and many other scope changes related to the complexity of individual pump stations. Additionally, the construction costs were increased to account for interim automation and inflated to December 1997 dollars.
- The schedule has been extended more than one year to allow for the appropriate phasing of the four construction contracts.

## CEB Impact

Incremental Cost in FY00	Incremental Cost in FY01	Description
(\$140,000)	(\$140,000)	Reduction of 8 employees due to automation.

## Bear Hill Improvements - Section 29 Rehabilitation

---

**Status:** This project remains in the preliminary in-house planning stage.

Projected Completion Date: November 2006

Current Phase: Planning

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$1,472	\$0	\$1,472	\$0	\$0	\$0	\$0	\$0	\$1,472

---

### Changes in Scope Since FY97-99 CIP

None.

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### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$1,367	\$1,472	\$105	Jan 2007	Nov 2006	(2) mos.

### Explanation of Changes:

- Inflation to December 1997 dollars.
- 

### CEB Impact

None.

# Spot Pond Pump Station Rehabilitation

**Status:** Substantial completion of construction is scheduled for fall of 1997. Additionally, construction of the suction pipe for Section 99 continues ahead of schedule, with completion expected in the spring of 1998.

Projected Completion Date: December 2000

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$33,182	\$27,628	\$5,554	\$2,318	\$1,539	\$1,062	\$635	\$0	\$0

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Fells Area Paving	New phase.
Design/CS/RI Fells Reservoir	Now a separate project in the Drinking Water Quality Improvements category.
Construction Fells Reservoir	Now a separate project in the Drinking Water Quality Improvements category.
DEP Permit Fees	Moved to Fells Covered Storage project in the Drinking Water Quality Improvements category.
Design/CA/RI & Construction Spot Pond Construction Field Office	New phases added to the proposed CIP and removed in the final CIP until the North Maintenance Facility site location issues have been resolved and space needs have been resolved.
Construction Tudor Barn	New phase added in the proposed CIP and removed from the final CIP. Staff is working with Massachusetts Historic Commission staff to better define the scope and cost of the project.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$32,416	\$33,182	\$766	Dec 2000	Dec 2000	None

## Explanation of Changes:

- ▶ Slight project cost increases are related to change orders for the construction of the suction pipe and pump station.

CEB Impact

Incremental Cost in FY99	Description
\$12,000	The new automated pump stations no longer require on-site personnel. However, routine maintenance will need to be performed by work crews traveling from facility to facility. Therefore, additional transportation costs will be incurred

# Weston Aqueduct Supply Main (WASM) 4

Status: MWRA awarded construction contract 2 in May.

Projected Completion Date: January 2004

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$46,409	\$2,733	\$43,676	\$4,078	\$10,669	\$6,154	\$4,252	\$7,557	\$10,966

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction - WATC & Master Meters - CP1	Changed 6,233 linear feet of 60-inch mains to 5,800 linear feet of three parallel 60-inch mains. Moved 4,100 linear feet and four master meters to MWWT - Construction Package 8 and combined remaining work with Construction Commonwealth Ave - CP2 Newton.
Construction - Commonwealth Ave - CP2 Newton	Added 100 linear feet of 48-inch and 1,900 linear feet of 60-inch pipe.
Construction - Washington St - CP3 Newton	Added 323 linear feet of 60-inch pipe and added 5,800 linear feet of 60-inch pipe moved from WASM 1 & 2 Rehab Project, rehab of Meters 104 & 105, Nonantum PRV, and sliplining of 1,600 linear feet of pipe.
Construction Section 15 (Brighton) - CP4	Added cleaning and lining of 800 feet of a 30-inch pipe on the Western Ave. bridge.
Construction MDC Bridge Crossing	Changed 791 linear foot 30-inch steel mains to 774 linear foot 30-inch steel mains.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$41,329	\$46,409	\$5,080	Jan 2004	Jan 2004	None

### Explanation of Changes:

- Increased costs are associated with transferring scope from WASM 1 & 2 to this project and revised construction cost estimates based on 30% design offset by the award of construction contract 2 for \$4 million less than the FY97-99 CIP budget.

**CEB Impact**

None.

# Spot Pond Supply Mains - Rehabilitation

**Status:** This project remains in the preliminary in-house planning stage.

Projected Completion Date: March 2008

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$55,652	\$0	\$55,652	\$898	\$981	\$443	\$360	\$3,344	\$49,626

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Preliminary Design and Design/CA/RI	Changed the name of Preliminary Study to Preliminary Design and combined with the Design/CA/RI phase. Also adjusted and expanded the scope (see below for details).
Construction CP1, CP2 & CP3	Phased breakdown of construction contracts based on prioritization of work as shown in "Scope". Added various pipe segments not previously included as follows: 1,130 linear feet of 64-inch pipe (Section 3); 1,600 linear feet of 48-inch pipe (Section 5); 565 linear feet of 48-inch pipe, 430 linear feet of 36-inch pipe and 530 linear feet of 30-inch pipe (Section 10); 6,900 linear feet of 48-inch pipe (Section 67); 260 linear feet of 64-inch pipe (Section 6A); 6,350 linear feet of 60-inch pipe (Section 12); and 1,000 linear feet of 60-inch pipe (Section 16W, WASM 3). Also changed quantity of pipe for rehabilitation/replacement as follows: East Main changed from 45,200 linear feet of 48-inch pipe (Sections 4, 6, and 7) to 44,650 linear feet, West Main changed from 35,500 linear feet of 48-inch pipe (Sections 9, 11 and 12) to 33,700 linear feet.
Easements CP1, CP2, & CP3	Changed phase name from Land to Easements and separated into three phases.
Equipment Purchase	Deleted.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$42,758	\$55,652	\$12,894	Jan 2009	Mar 2008	(10) mos.

### Explanation of Changes:

- The cost changes are a result of the addition of 16W from the Northern Lower Service Pipeline Replacement project, an increase of 2,000 linear feet of pipeline, and the addition of pressure valves.
- Recent project planning has resulted in scope changes which reduced the overall magnitude of the project and shortened the construction schedule by almost one year.

## CEB Impact

None.

# Northern Low Service Pipeline Replacement

**Status:** MWRA began preliminary design for the replacement of section 16W in Medford, with construction scheduled to commence in the spring of 1998.

Projected Completion Date: September 1998

Current Phase: Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$822	\$221	\$601	\$301	\$300	\$0	\$0	\$0	\$0

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Design/CS/RI & Construction	Reduced scope to replacement of approximately 500 linear feet of pipe to address urgent rehabilitation/replacement of a segment of the pipe prone to frequent leaks. The Design/CS/RI for this work will be done by in-house staff. The remaining pipeline rehabilitation/replacement will be done as part of the Spot Pond Supply Mains project.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$1,710	\$822	(\$888)	Apr 2003	Sep 98	(55) mos.

### Explanation of Changes:

- ▶ The reduction in design cost is a result of the use of in-house staff to complete the design phase. The reduction in construction cost is a result of moving connecting valves and associated pipe to the Spot Pond Supply Main project.
- ▶ The schedule is accelerated by almost five years due to the seriousness of the pipeline conditions and leaks and the transfer of long term construction to the Spot Pond supply main project.

### CEB Impact

None.

# Water Main Relocation in Chelsea River

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**Status:** MWRA awarded the design contract for the relocation of the water main in the Chelsea River in May.

Projected Completion Date: August 2000

Current Phase: Design

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$1,097	\$0	\$1,097	\$210	\$230	\$600	\$57	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Planning/Design/ CA/RI & Construction	Removed work associated with the second crossing (Section 38).

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$1,097	\$1,097	\$0	Nov 2001	Aug 2000	(15) mos.

## Explanation of Changes:

- The schedule is accelerated by more than one year due to the reduction in scope.
- 

## CEB Impact

None.

## Northern Low Service Rehabilitation - Sections 8 and 57

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**Status:** This project remains in the preliminary in-house planning stage.

Projected Completion Date: November 2006

Current Phase: Planning

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### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$11,181	\$0	\$11,181	\$0	\$0	\$0	\$0	\$0	\$11,181

---

### Changes in Scope Since FY97-99 CIP

None.

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### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$10,515	\$11,181	\$666	Mar 2007	Nov 2006	(4) mos.

### Explanation of Changes:

- Cost increase adjustment for inflation to December 1997 dollars.
- 

### CEB Impact

None.

# New Connecting Mains - Shaft 7 to WASM 3

**Status:** MWRA has more clearly defined the requirements of this project and divided the construction work among four contracts.

Projected Completion Date: March 2012

Current Phase: Planning

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$49,902	\$575	\$49,327	\$0	\$494	\$494	\$494	\$665	\$47,180

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Design/CA/RI, Construction, & Easements	Changed from one Design/CA/RI contract and two Construction contracts and divided Easements into four different contracts.
Design/CA/RI & Construction - North Segment & Intermediate High	<b>North Segment:</b> Reduced length by 480 linear feet.  <b>Intermediate Sections:</b> Increased cleaning and lining of Section 60 by 2,943 linear feet. Decreased cleaning and lining of Sections 59 (between Belmont Pump Station and Section 60) by 320 linear feet and changed the cleaning and lining of Section 59 (between Section 25 and the Belmont Pump Station) to replacement of 7,772 linear feet 20-inch diameter pipeline with 24-inch pipeline. Deleted 4,900 linear feet of new 20-inch pipe on Section 25.
Design/CA/RI & Construction - South Segment	<b>South Segment:</b> Added 345 linear feet of new 24-inch pipe and 350 linear feet of 20-inch pipe. Reduced the total length of cleaning and lining by 2,040 linear feet for Sections 23, 24, and 47.
Design/CA/RI & Construction - West Segment	<b>West Segment:</b> Increased the new 36-inch pipe by 550 linear feet, deleted 1,700 linear feet of new 16-inch pipe.
Design/CA/RI & Construction - Northeast Segment	<b>Northeast Segment:</b> Deleted 6,000 linear feet of new 24-inch pipe. Added cleaning and lining of 17,200 linear feet of pipe on Sections 18 (16 to 20-inch), 50 (20-inch), and 51 (48-inch).

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$59,860	\$49,902	(\$9,958)	Jan 2007	Mar 2012	62 mos.

**Explanation of Changes:**

- The project cost decreased based on more defined construction requirements outlined in the changes to scope.
  - The schedule was extended by five years, based on a reassessment of construction phasing.
- 

**CEB Impact**

None.

# Northern High Service - Replacement Section 26

**Status:** The project components have been combined with the Northern High Service Revere & Malden Pipeline Improvements. This project will be eliminated from the FY99-01 CIP.

Projected Completion Date: N/A

Current Phase: N/A

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
All phases	Combined with Northern High Service Revere & Malden Pipeline Improvements.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$5,056	\$0	\$5,056	N/A	N/A	N/A

## Explanation of Changes:

N/A

## CEB Impact

None.

# Northern High Service - Connecting Mains to Section 91

**Status:** MWRA approved the preliminary design in January and expects to receive the 60% design in the fall of 1997.

Projected Completion Date: October 2002

Current Phase: Design

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$4,179	\$371	\$3,808	\$136	\$154	\$621	\$1,240	\$1,240	\$417

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction	Change 3,800 linear feet of new 24-inch pipe to 3,800 linear feet of new 16-inch pipe. Eliminated 5,700 linear feet of new 36-inch diameter pipeline.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$6,216	\$4,179	(\$2,037)	Oct 2002	Oct 2002	None

### Explanation of Changes:

- Project cost decrease due to removal of the connection main from Section 91 to Section 71.

### CEB Impact

None.

# Northern High Service Improvements - Lynn Pipeline

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**Status:** Design was substantially complete in October 1996 and construction is expected to begin in December 1997, for the final construction phase.

Projected Completion Date: November 1998

Current Phase: Construction

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$14,457	\$11,765	\$2,692	1,574	\$1,118	\$0	\$0	\$0	\$0

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## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$14,065	\$14,457	\$392	Jul 98	Nov 98	4 mos.

## Explanation of Changes:

- The cost estimate from the final construction phase was inflated to December 1997 dollars.
- 

## CEB Impact

None.

# Northern High Service - Section 27 Improvements

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**Status:** This project remains in the preliminary planning stage.

Projected Completion Date: November 2001

Current Phase: Planning

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$2,955	\$0	\$2,955	\$0	\$10	\$0	\$1,963	\$982	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

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## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$2,775	\$2,955	\$180	Feb 2001	Nov 2001	9 mos.

## Explanation of Changes:

- ▶ Cost increase reflects adjustment for inflation to December 1997 dollars.
  - ▶ Schedule change reflects reassessment of design and construction durations for current scope.
- 

## CEB Impact

None.

# Northern High Service - Revere/Malden Pipeline Improvements

**Status:** The conceptual design report for the construction of Section 53, one of the two final construction phases, was issued in April.

Projected Completion Date: November 2003

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$30,521	\$23,637	\$6,884	\$140	\$5	\$256	\$2,593	\$216	\$3,674

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction Eastern Ave Sidewalk Restoration	New phase.
Design & Construction Revere Section 53 & Section 26	Changed the replacement of 6,000 linear feet of 36-inch to replacement of 1,500 linear feet of 30-inch and the rehabilitation of 4,500 linear feet of 30-inch pipe. Added replacement of 5,825 linear feet of 12-inch pipe along Section 26. This work was moved from Northern High Service - Replacement Section 26 Revere.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$29,126	\$30,521	\$1,395	Jun 2002	Nov 2003	17 mos.

## Explanation of Changes:

- The cost increase is due to the addition of 5,825 linear feet of pipe along section 26.
- The schedule has been extended approximately 1 ½ years because of above mentioned scope change.

## CEB Impact

None.

# Northern High Service - Pipeline Rehabilitation

---

Status: This project remains in the preliminary planning stage.

Projected Completion Date: November 2006

Current Phase: Planning

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## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$14,733	\$0	\$14,733	\$0	\$0	\$0	\$0	\$138	\$14,595

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$13,861	\$14,733	\$872	Dec 2009	Nov 2006	(37) mos.

## Explanation of Changes:

- ▶ Cost increase reflects adjustment for inflation to December 1997 dollars.
  - ▶ The schedule was accelerated by three years based on a reassessment of the scope and schedule. This schedule will be reassessed again in the FY99-01 CIP process.
- 

## CEB Impact

None.

---

# Northern Extra High Service - New Pipelines

---

**Status:** 60% design was completed in April with construction expected to begin in March 1999.

Projected Completion Date: June 2000

Current Phase: Design

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$3,293	\$227	\$3,066	\$76	\$791	\$2,199	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Construction	Combined two construction phases into one. Changed replacement of 2,600 linear feet of 30-inch pipe to 24-inch pipe.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$3,255	\$3,293	\$38	Jun 2000	Jun 2000	None

---

## Explanation of Changes:

- ▶ Cost increase reflects adjustment for inflation to December 1997 dollars.
- 

## CEB Impact

None.

# Hydraulic Model Update

---

**Status:** This project remains in the preliminary in-house planning stage.

Projected Completion Date: July 2000

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$326	\$0	\$326	\$0	\$157	\$156	\$13	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$300	\$326	\$26	Jan 2000	Jul 2000	6 mos.

## Explanation of Changes:

- ▶ Cost increase reflects adjustment for inflation to December 1997 dollars.
  - ▶ The schedule was delayed 6 months based on a reassessment of resources and time necessary to complete the scope.
- 

## CEB Impact

None.

# Central Monitoring System

**Status:** New equipment purchases were completed for Norumbega Reservoir, Commonwealth Pump Station, and Shaft 9A chlorine residuals monitoring.

Projected Completion Date: August 1999

Current Phase: Construction

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$12,615	\$9,314	\$3,301	1,808	\$1,348	\$145	\$0	\$0	\$0

## Changes in Scope Since FY97-99 CIP

None.

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$12,515	\$12,615	\$100	Aug 99	Aug 99	None

## CEB Impact

Incremental CEB Cost in FY99	Incremental CEB Cost in FY00	Description
\$131,000	\$20,000	Additional cost for three new vehicles for new SCADA crews, the connection of telephone data lines, and additional maintenance agreements with Oracle for SCADA equipment.

# Rehabilitation of Existing Facilities

---

**Status:** Contracts for underground tank replacement and numerous smaller facilities maintenance projects were awarded throughout the year.

Projected Completion Date: September 2007

Current Phase: Construction

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payment thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$11,487	\$3,289	\$8,198	2,652	\$3,320	\$2,033	\$0	\$0	\$193

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$9,083	\$11,487	\$2,404	Sep 2007	Sep 2007	None

## Explanation of Changes:

- The project costs increased slightly due to change order activity.
- 

## CEB Impact

None.

# Distribution System Facilities Mapping

---

**Status:** In the spring of 1997, MWRA purchased data from Boston Edison at a cost significantly less than the cost to develop such data in-house or by survey.

Projected Completion Date: August 1999

Current Phase: Design

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$1,048	\$487	\$561	\$260	\$259	\$42	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Planning/Design	Added development of base land data for towns not in the Boston Edison service area (data purchase phase) and which have no plans to develop the data on their own.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$748	\$1,048	\$300	Aug 98	Aug 99	12 mos.

## Explanation of Changes:

- The project costs increased to allow for the development of land based data not included in Boston Edison's data.
- 

## CEB Impact

None.

# Local Water Infrastructure Rehabilitation Assistance Program

---

**Status:** In March, MWRA issued the guidelines for participation in the Local Water Infrastructure Rehabilitation Assistance Program. The first distributions to requesting communities occurred in August 1997.

Projected Completion Date: June 2004

Current Phase: Grant/Loan distribution

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$7,500	\$0	\$7,500	\$20,000	\$7,000	(\$4,500)	(\$4,500)	(\$4,500)	(\$6,000)

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$0	\$7,500	\$7,500	Dec 2004	Jun 2004	(6) mos.

## Explanation of Changes:

- The FY97-99 CIP assumed a loan program rather than a grant/loan program.
  - Schedule change reflects program completion at end of 2004 fiscal year rather than calendar year.
- 

## CEB Impact

None.





# North Maintenance Facility

---

**Status:** MWRA staff continue to study options for siting and construction of the maintenance of the Central Distribution and Maintenance Facility.

Projected Completion Date: October 2002

Current Phase: Planning

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$18,520	\$517	\$18,003	\$0	\$4,385	\$1,050	\$4,779	\$5,323	\$2,466

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$18,058	\$18,520	\$462	Oct 2001	Oct 2002	12 mos.

## Explanation of Changes:

- ▶ Cost increase adjustment for inflation to December 1997 dollars.
  - ▶ The one year schedule delay results from difficulty in locating a suitable site for the facility.
- 

## CEB Impact

None.

## Fore River Staging Area

---

**Status:** Final rehabilitation for MWRA use is near completion. Purchase and sale of a portion of the site to Mass Heavy Industries is anticipated in fall 1997.

Projected Completion Date: November 1997

Current Phase: Construction

---

### Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$10,083	\$9,853	\$230	\$230	\$0	\$0	\$0	\$0	\$0

---

### Changes in Scope Since FY97-99 CIP

None.

---

### Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$9,268	\$10,083	\$815	Nov 97	Nov 97	None

### Explanation of Changes:

- Cost increase primarily due to the moving the FRSA Upland Phase II design from the Boston Harbor Project to the Fore River Staging Area project.
- 

### CEB Impact

None.

# Technical Assistance

---

**Status:** MWRA continues to use technical assistance contracts in support of various CIP projects.

**Projected Completion Date:** November 2000

**Current Phase:** On-going

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY 02
\$3,875	\$0	\$3,875	\$1,308	\$1,308	\$1,259	\$0	\$0	\$0

---

## Changes in Scope Since FY97-99 CIP

None.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$5,138	\$3,875	(\$1,263)	Aug 1999	Nov 2000	15 mos.

## Explanation of Changes:

- Cost decrease based on revised assumptions for technical assistance.
  - Schedule extension based on award of additional contracts or execution of additional one year options for various contracts.
- 

## CEB Impact

None.

# Business Systems Plan

---

**Status:** MWRA continues upgrading technology in support of the our business and operations, to ensure cost effective use of staff resources.

Projected Completion Date: June 2001

Current Phase: Implementation of Phase I and II

---

## Expenditure Forecast (in \$000s)

Total Cost	Projected Payments thru FY97	Remaining Balance	FY 98	FY 99	FY 00	FY 01	FY 02	Beyond FY02
\$5,877	\$2,254	\$3,623	\$1,360	\$800	\$463	\$500	\$500	\$0

---

## Changes in Scope Since FY97-99 CIP

Phase	Change/Explanation
Phase III	Provided funding for a previously unfunded phase for improvements FY99-01.

---

## Changes to Project Cost and Schedule

Total Project Cost (\$000s)			Schedule: Projected Completion Date		
FY97	FY98	Change	FY97	FY98	Change
\$4,677	\$5,877	\$1,200	Jun 2001	June 2001	None

### Explanation of Changes:

- Cost increase to fund Phase III.
- 

### CEB Impact

None.

## SOURCE OF FUNDS (\$000)

	State Construction Grant Fund	Federal Construction Grant Fund	Special Federal Grants	State Revolving Loan Fund	Other	Bonds/Cash Financing	TOTAL
<b>WASTEWATER</b>							
Quincy Pump Facilities	48	240		\$1,979		\$18,039	\$20,018
Braintree-Weymouth Relief	887			23,304		136,821	157,109
Upper Neponset Valley Relief						7,248	31,439
Wellesley Extension Sewer	30,115	18,955				2,998	2,998
Frammingham Extension Sewer	1,142			19,700		23,410	72,480
Cummingsville Replacement Sewer						26,561	47,403
North Metropolitan Trunk Sewer				13,500		4,430	4,430
Siphon Structure Rehab.						1,731	15,231
Wastewater Metering						5,661	5,661
Ashtland Extension Sewer						400	400
System Master Plan Interceptors						1,005	1,005
Corrosion and Odor Control Study						19,734	19,734
Wastewater Facil. Rehabilitation						685	685
West Roxbury Tunnel						3,551	3,551
Wastewater Central Monitoring						323	323
Remicte Headworks Rehab.						600	600
BHP Performance Certification						3,568	3,568
Deer Island Primary & Secondary	9,657		638,246	340,419		1,550	1,550
Water Transportation Facilities	18,086	12,148	5,055	17,049		2,107,580	3,095,902
As Needed Design/CS/RI						197,512	249,850
Construction Services						500	500
On-Site Generation of Sodium Hypo						1,500	1,500
DI Coastal Protection						15,475	15,475
DI Plant Wide System						0	0
DI Dry Storage Warehouse						250	250
Clinton Landfill Liner Repair						4,200	4,200
Residuals Management Facilities	354		11,399			400	400
CSOs	1,122		1,370			40,103	51,856
Infiltration/Inflow Local Assist.				23,465		443,958	469,915
						15,937	15,937
<b>WATERWORKS SYSTEM IMPROVEMENTS</b>							
Walnut Hill Water Treatment Plant						\$411,817	\$411,817
Quabbin Water Treatment Plant						5,708	5,708
Watershed Protection						8,602	8,602
Norumbega Covered Storage						111,133	111,133
Nash Hill Covered Storage						14,929	14,929
Blue Hills Covered Storage						27,700	27,700
Pearl Hill Covered Storage						5,419	5,419
Fells Covered Storage						16,020	16,020
Metrowest Tunnel	24					623,039	623,063
Dam Control Valve Replacement						1,870	1,870
Sluice Gate Rehabilitation						7,599	7,599
Metropolitan Tunnel Loop						222	222
Chicopee Valley Interconnections						4,150	4,150
Winsor Dam Hydroelectric						85	85



## SOURCE OF FUNDS (\$000)

	State Construction Grant Fund	Federal Construction Grant Fund	Special Federal Grants	State Revolving Loan Fund	Other	Bonds/Cash Financing	TOTAL
Valve Replacement						12,026	12,026
Cathodic Protection of Dist. Mains						221	221
Boston Low Service Pipe/Valve	114					25,604	25,718
WASM 1 & 2 Rehabilitation						33,292	33,292
Nonantum Rd. Pipe Replacement						2,136	2,136
Warren Cottage Line Rehab	36					1,560	1,596
Southern Service Improvements						14,056	14,056
Heath Hill Road Pipe Replacement	128					16,297	16,297
Southern Spine Distribution Mains						38,045	38,173
Southern Extra High-Secs 41, 42, & 74						8,358	8,358
Chestnut Hill Connecting Mains	66					8,975	9,041
Newton Service Improvements	36					7,683	7,719
Comm Avenue Pump Modernization						6,978	6,978
Lexington St. Pump Station Rehab						3,451	3,451
Rehab. of Other Pump Stations	43					13,727	13,771
Bear Hill Improvements - Sec 29 Rehab.	33					1,429	1,472
Spot Pond Pump Station Rehab.						33,149	33,182
Weston Aqueduct and Supply Main 4						46,409	46,409
Spot Pond Supply Mains-Rehab.	119					55,533	55,652
Northern Low Serv. Pipeline Replac.						822	822
Water Main Reloc-Chelsea River	1,097					0	1,097
Connecting Mains-Shaft 7-WASM 3	24					11,157	11,181
Northern High Serv.-Sec 26 Replace.	14					49,888	49,902
Northern High Serv.-Sec 91	38					0	0
Northern High Serv.-Lynn Pipeline						4,141	4,179
Northern High Serv.-Sec 27 Improv.	14					14,457	14,457
Northern High Serv.-Revere/Malden						2,941	2,955
Northern High Serv.-Pipeline Rehab	14					30,521	30,521
Northern Extra High Service	52					14,719	14,733
Hydraulic Model Update						3,241	3,293
Central Monitoring System						326	326
Rehab of Existing Facilities						12,615	12,615
Distribution Systems Fac. Mapping						11,487	11,487
Local Water Infrastructure Rehab.						1,048	1,048
						7,500	7,500

## BUSINESS AND OPERATIONS

SUPPORT						\$18,520	\$18,520
North Maintenance Facilities						10,083	10,083
Fore River Staging Area						3,875	3,875
Technical Assistance Contracts						5,877	5,877
Business Systems Plan						\$4,876,170	\$6,066,262
TOTAL	\$63,263	\$31,343	\$656,070	\$439,416	\$0		







**Capital Expenditure Forecasts**

**Supplement to the**

**FY98-00 Capital Improvement Program**



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# About This Document

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Capital expenditure forecasts, sometimes referred to as project cash flows, are presented in this supplement to the FY98-00 Capital Improvement Program. Capital project narratives and summary cost and schedule tables are presented in the primary CIP document. Expenditure forecasts are accrual based. As a result, projected expenditures are reported based on when services are expected to be rendered.

Projects appear in this report in the same order they appear in the primary CIP document, organized by capital program. Grant and loan receipts for various projects and programs appear at the end of each capital program section.

The following presents a description of each column in the expenditure forecast spreadsheets which comprise this document:

<b>Project Names</b>	Project names are presented in the first column of the expenditure forecast in capital letters.
<b>The Five Digit and Four Digit Contract Number</b>	<p>Under each project name, you will find five and four digit numbers for each project phase. These numbers are assigned by the Rates and Budget Department prior to the contract award.</p> <p>The five digit number represents the MWRA Financial Management System's (FMS) subphase number. Project budgets and expenditures are tracked by this account number.</p> <p>The four digit number is a manually assigned contract identifier that is entered into the MWRA Purchasing and Stores Inventory (PSI) system as the contract reference number when the contract is executed. This reference number is used to access contract information such as the award amount, change order activity, and processed invoices.</p>
<b>Project Phase</b>	Next to the four digit contract number, you will find the name of the project phase. Project phases are typically defined components of projects like study, design, construction, or related services.
<b>Project Participant</b>	The <b>project participant</b> is the consultant, designer, or the contractor(s) who has been awarded the contract for the project phase. Non-awarded contracts are identified by "TBS" (to be selected).
<b>Notice to Proceed and Substantial Completion</b>	Project Schedules are identified by two key milestones. These milestones indicate the expected start and end dates for contract activity.
<b>Total Contract Amount</b>	The <b>Total Contract Amount</b> represents a contract's upset limit. For unawarded contracts, the contract amount is based on a cost estimate. For awarded contracts, this amount includes the award amount and any change orders, amendments, and purchase orders accounted for prior to finalizing the budget.
<b>Projected Payments through FY97</b>	The <b>Projected Payments through FY97</b> column presents total expenditures since the inception of the contract. Excluding the forecast used for the last quarter of FY97, the amount is generated through FMS.
<b>Remaining Balance 6/30/97</b>	<b>Remaining Balance 6/30/97</b> is calculated by subtracting <b>Projected Payments through FY97</b> from the <b>Total Contract Amount</b> . This amount is then spread in the columns to the right, from FY98 to Beyond FY2002.

**Expenditure  
Forecasts**

The remaining columns in the spreadsheet contain projections for capital spending by project phase across fiscal years 1998 through 2002, and then beyond FY2002. Forecasts are divided by quarters for FY98, and presented annually for fiscal years 1999 through 2002. Expenditure forecasts for the fiscal years beyond 2002 are accumulated in the last column.

Quarterly expenditure forecasts for the first fiscal year of the budget, FY98, are displayed. For FY99 and FY00, annual amounts are shown.

# THREE-YEAR CAPITAL IMPROVEMENT SUMMARY BY MAJOR CATEGORY

FINAL CAPITAL IMPROVEMENT PROGRAM EXPENDITURE FORECAST FY 1998-2000 (\$000)											
	Total Contract Amount	Previous Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	3-YEAR TOTAL
Boston Harbor Project	\$3,345,752	\$2,862,680	\$483,072	\$67,395	\$58,825	\$40,774	\$50,638	\$217,632	\$178,048	\$80,360	\$476,040
Wastewater System Improvements	1,099,915	384,825	715,090	22,007	19,526	17,282	15,143	73,958	52,699	96,126	222,793
Waterworks System Improvements	1,750,139	239,590	1,510,549	34,919	37,089	42,680	51,252	165,940	188,600	190,889	545,429
Business & Operations Support	38,355	12,624	25,731	667	767	667	797	2,898	6,493	2,772	12,163
Contingency	293,365	0	293,365	12,213	12,213	12,213	12,210	48,849	62,904	39,342	151,095
TOTAL	\$6,527,526	\$3,499,719	\$3,027,807	\$137,201	\$128,420	\$113,616	\$130,040	\$509,277	\$488,744	\$409,489	\$1,407,510

# TEN-YEAR CAPITAL IMPROVEMENT SUMMARY BY MAJOR CATEGORY

FINAL CAPITAL IMPROVEMENT PROGRAM EXPENDITURE FORECAST FY 1998-2007 (\$000)											
	FY98	FY99	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	10-YEAR TOTAL
Boston Harbor Project	\$217,632	\$178,048	\$80,360	\$7,032	\$0	\$0	\$0	\$0	\$0	\$0	\$483,072
Wastewater System Improvements	73,958	52,699	96,126	127,988	134,418	73,163	60,558	38,672	31,118	16,887	705,587
Waterworks System Improvements	165,940	188,600	190,889	225,511	233,602	217,355	106,989	52,992	44,129	38,674	1,464,681
Business & Operations Support	2,898	6,493	2,772	5,279	5,823	2,466	0	0	0	0	25,731
Contingency	48,849	62,904	39,342	38,868	39,044	29,510	15,489	7,940	6,491	4,928	293,365
TOTAL	\$509,277	\$488,744	\$409,489	\$404,678	\$412,887	\$322,494	\$183,036	\$99,604	\$81,738	\$60,489	\$2,972,436

**WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$000)**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY2000	FY2001	FY2002	BEYOND FY2002
<b>A. INTERCEPTION AND PUMPING:</b>															
<b>QUINCY PUMP FACILITIES</b>															
10024 5400 Facilities Plan/IR	Whitman, Howard	Dec-87	Mar-95	\$526	\$526	\$0					\$0				\$0
10025 5402 Design/CS - Rehab	R. Kimball	Jul-91	Canceled	110	110	0					0				0
10026 5403 Constr. - Rehab	Harding & Smith	Jul-89	Aug-97	\$698	378	320	30	30	30	30	120	200			0
10035 5943 Land Acquisition	TBS	May-96	Jun-97	\$40	25	15	15	15	15	15	15				0
10027 5404 Design/CS/IR 1	Far Spofford & Thorne	Aug-94	Feb-2002	\$3,973	1,256	2,717	125	125	125	125	500	228	750	489	0
10028 5405 Construction 1	TBS	Jun-99	Feb-2002	\$3,612	0	3,612					0	2,007	1,605		0
10029 5406 Construction 2	TBS	Jan-2001	Feb-2002	\$5,586	136	5,450					0		1,817	3,633	0
10030 5407 Construction 3	TBS	Mar-98	Mar-99	\$3,952	0	952				95	95	857			0
10031 5408 Construction 4	St Paul/Seaboard Surety	Mar-93	Feb-95	\$2,093	2,093	0					0				0
10032 5409 Construction 5	TBS	Jun-98	Jun-99	\$1,531	0	1,531					0	1,400	131		0
10033 5410 Construction 6	TBS	Jun-98	Jun-99	\$838	0	838					0	750	88		0
10076 6069 Legal	TBS	Jul-95	Jul-2002	\$5	0	5		1			1	1	2	1	0
10084 6070 Public Relations	TBS	Jul-95	Jul-2002	\$5	0	5		1			1	1	2	1	0
10082 6071 Haz Waste	TBS	Jul-95	Jul-2002	\$5	0	5		1			1	1	2	1	0
10032 5950 Technical Assistance	Various	Dec-87	Jan-2002	\$44	44	0					0				0
<b>Project Total:</b>				<b>\$20,018</b>	<b>\$4,568</b>	<b>\$15,450</b>	<b>\$170</b>	<b>\$198</b>	<b>\$195</b>	<b>\$250</b>	<b>\$733</b>	<b>\$3,438</b>	<b>\$2,882</b>	<b>\$4,175</b>	<b>\$0</b>

<b>BRAINTREE-MEYER MOUTH RELIEF FACILITIES</b>															
10045 5311 Fac Plan Phase 1	Maguire	Oct-81	Dec-90	\$331	\$331	\$0					\$0				\$0
10046 5312 EIR Phase 1	Maguire	Nov-84	Oct-90	\$14	514	0					0				0
10057 5324 Final EIR/Fac Plan	Melcat & Eddy	Apr-91	Aug-93	\$1,124	1,124	0					0				0
10044 5332 Geotechnical-Land	Flores Test	Nov-91	Mar-92	\$8	8	0					0				0
10001 5333 Geotechnical-Marine	George & Drilling	Nov-91	Apr-92	\$443	443	0					0				0
10047 5313 Design VCS/IR	Stone & Webster	Nov-84	Feb-2002	\$8,874	3,338	5,536	250	225	225	225	925	250	1,400	1,161	0
10251 6016 Sedimentation Tests	Battelle	Sep-94	Apr-96	\$100	96	4	4				4				0
10058 5331 Design 2CS/IR	Malcal & Eddy	Apr-95	Apr-2002	\$5,860	1,377	4,503	742	765	227	86	1,820	488	450	500	745
10048 5314 Land Acquisition	TBS	Mar-97	Feb-2002	\$3,313	2	3,311		20		2,500	2,520	500	291	25,000	0
10049 5315 Construction 1	TBS	May-99	Oct-2001	\$50,302	0	60,302					0	7,000		15,302	0
10050 5316 Construction 2	TBS	Jun-99	Oct-2001	\$23,472	0	23,872					0			10,914	500
10051 5303 Construction 3	TBS	Apr-2001	Apr-2002	\$11,414	0	11,414					0			9,069	300
10052 5373 Construction 4	TBS	Apr-2001	Apr-2002	\$9,569	0	9,569					0			4,876	8,173
10053 5374 Construction 5	TBS	Apr-2001	Apr-2002	\$5,176	0	5,176					0			2,662	4,453
10054 5375 Construction 6	TBS	Jul-2002	Oct-2002	\$8,173	0	8,173					0				0
10059 5317 Construction 7	TBS	Jun-2002	Oct-2002	\$4,463	0	4,463					0				0
10060 5310 Construction 8	TBS	Jun-98	Jun-98	\$2,500	0	2,500			1,000	1,500	2,500				0
10302 6368 Construction 9	R. Kimball	Jul-91	Canceled	\$24	24	0					0				0
10055 5308 Design-Rehab	Harding & Smith	Jan-92	Canceled	\$293	267	26	10	10	6		28	1	1	1	0
10056 5309 Constr. - Rehab	TBS	Jul-95	Aug-2004	\$5	0	5		1			1	1	1	1	0
10285 6074 Haz Waste	TBS	Jul-95	Aug-2004	\$5	0	5			1		1	1	1	1	0
10283 6072 Legal	TBS	Jul-95	Aug-2004	\$5	0	5			1		1	1	1	1	0
10284 6073 Public Relations	TBS	Jul-95	Aug-2004	\$5	0	5			1		1	1	1	1	0
10061 5951 Technical Assistance	TBS	Nov-84	May-2002	\$101	101	0					0				0
10278 6119 Design-Marine Pipeline*	Various	Feb-97	Aug-97	\$7,468	431	7,037	500	270			770				0
<b>Project Total:</b>				<b>\$157,809</b>	<b>\$8,056</b>	<b>\$148,053</b>	<b>\$1,506</b>	<b>\$1,291</b>	<b>\$1,480</b>	<b>\$4,311</b>	<b>\$8,568</b>	<b>\$1,241</b>	<b>\$25,144</b>	<b>\$35,303</b>	<b>\$17,333</b>

\*Please note the expenditure forecast only includes \$1.1 million in expenditures for Design-Marine Pipeline as the budget assumes proceeding on only one track for the sludge pipeline beyond FY98

WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$000)

PROJECT	Project Participants	Notice to Proceed	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>NEW NEPONSET VALLEY RELIEF SEWER</b>															
10082 5380 Facilities Plan	LEA	Apr-83	\$594	\$594	\$0					\$0					\$0
10083 5381 EIR/Supp. Fac Plan	LEA	Dec-86	\$626	\$626						0					0
10064 5382 Design/CSRI	F&S/Spofford	Dec-91	\$626	\$626	389					200	189				0
10065 5383 Land Acquisition	Various	Feb-89	\$4,395	\$4,395	354					50					0
10075 5378 Consultant-Milton	Various	Dec-90	\$845	\$845	354					50					0
10076 5377 Consultant-Canton	Milton C. C.	Mar-95	\$42	\$42	37					10					0
10078 5377 Consultant-Canton	Wescott Constr	Apr-97	\$182	\$182	27					7					0
10087 5385 Construction 1	Wescott Constr	Sep-93	\$5,203	\$5,203	0					7					0
10088 5380 Construction 2	D&C Construction	Dec-93	\$2,547	\$2,547	0					6					0
10069 5384 Construction 3	P. Gloose & Sons	Nov-84	\$3,264	\$3,264	0					0					0
10070 5385 Construction 4	J. J. Amico	Apr-94	\$2,958	\$2,958	0					0					0
10071 5389 Construction 5	P. Callaco Corp	Oct-95	\$9,550	\$9,550	0					0					0
10072 5386 Study Dedham St	Thermo Water	Dec-94	\$1,000	\$1,000	475					10					435
10074 5379 Power Line	NE Telephone	Nov-90	\$64	\$64	0					40					0
10073 5382 Technical Assistance	Various	Apr-88	\$189	\$189	0					0					0
<b>Project Total:</b>			<b>\$31,439</b>	<b>\$20,157</b>	<b>\$1,282</b>	<b>\$77</b>	<b>\$77</b>	<b>\$77</b>	<b>\$73</b>	<b>\$304</b>	<b>\$189</b>	<b>\$0</b>	<b>\$354</b>	<b>\$0</b>	<b>\$435</b>

<b>UPPER NEPONSET VALLEY RELIEF SEWER</b>															
10255 6030 Planning/Des/CSRI	TBS	Jul-2001	\$2,988	\$0	\$2,988					\$0					2,598
<b>Project Total:</b>			<b>\$2,988</b>	<b>\$0</b>	<b>\$2,988</b>					<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$400</b>	<b>\$2,598</b>

<b>WELLESLEY EXTENSION REPLACEMENT SEWER</b>															
10091 5345 Study	SEA	Oct-81	\$324	\$324	\$0					\$0					\$0
10080 5346 Design/EIR/CSRI	SEA	Dec-84	\$6,630	\$6,630	536					0					0
10081 5347 Land Acquisition	Various	Mar-2003	\$4,041	\$4,041	872					0	536				472
10082 5348 Consultant-Needham	Needham C. C.	Aug-88	\$270	\$270	164					10		200			0
10083 5344 Consultant-Dedham	Dedham C. C.	Jun-89	\$120	\$120	62					15					0
10084 5342 Consultant-Dover	Dover C. C.	Aug-91	\$20	\$20	5					30	28				0
10084 5349 Construction 1	J.F. White	Jun-89	\$15,069	\$15,069	0					5					0
10086 5351 Construction 2	Modern Constr	Aug-89	\$5,087	\$5,087	0					0					0
10087 5434 Construction 3	P. Gloose	Mar-90	\$6,927	\$6,927	0					0					0
10085 5350 Construction 4	P. Gloose	Jul-91	\$4,821	\$4,821	0					0					0
10088 5431 Construction 5	Modern Constr	Jun-89	\$5,387	\$5,387	0					0					0
10089 5432 Construction 6	FED Corp	Nov-90	\$2,068	\$2,068	0					0					0
10090 5433 Construction 7	Insulform of N.E.	Dec-91	\$12,544	\$12,544	0					0					0
10090 5434 Construction 8	TBS	Jun-2001	\$6,340	\$6,340	0					0					0
10283 6044 Construction 8	S. C. Finney & Assoc	Jun-96	\$404	\$404	65					100	79	80			4,940
10289 6065 EIC	TBS	Sep-95	\$230	\$230	339					25					0
10289 6078 Legal	TBS	Dec-95	\$5	\$5	0					1	2	1			0
10270 6079 Public Relations	TBS	Feb-97	\$30	\$30	4					1					0
10093 5353 Technical Assistance	Various	Mar-2004	\$193	\$193	5					3	2				0
<b>Project Total:</b>			<b>\$72,480</b>	<b>\$64,215</b>	<b>\$9,265</b>	<b>\$55</b>	<b>\$37</b>	<b>\$51</b>	<b>\$36</b>	<b>\$179</b>	<b>\$713</b>	<b>\$281</b>	<b>\$280</b>	<b>\$1,400</b>	<b>\$5,412</b>

**WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$000)**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002	
FRAMINGHAM EXTENSION RELIEF SEWER	Anderson Nichol	Feb-90	Jul-90	\$1,402	\$1,402	\$0										\$0	
	Various	Jun-91	Dec-2000	\$1,320	702	618			5	25	25	55	0	200	363		
	Anderson Nichol	Jul-90	Oct-2000	\$5,770	4,645	1,125		100	100	100	100	350	200	175		0	
	J. D'Amico, Inc.	May-96	May-97	\$7,362	6,255	1,107		1000	107		1,107					0	
	Zenone, Inc.	May-96	Jan-98	\$6,106	4,870	1,236		800	400	36	1,236					0	
	Westcott Construction	Jul-96	Jan-98	\$7,199	3,988	3,211		2,000	800	411	3,211					0	
	Instituto of N.E.	Jun-94	Mar-95	\$4,810	4,810	0										0	
	TBS	Jan-99	Sep-2000	\$13,287	0	13,287					0	3,287	7,000	3,000		0	
	Various	Feb-90	May-2000	\$147	147	0											0
																	0
	Project Total:			\$47,403	\$26,819	\$20,584	\$3,900	\$1,412	\$572	\$125	\$6,009	\$3,637	\$7,200	\$3,376	\$463	\$0	

CUMMINGSVILLE REPLACEMENT SEWER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
10217	5826	Fac Plan/EIR	Weston&Sampson	Jun-92	Jul-95	\$605	50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

NORTH METROPOLITAN TRUNK SEWER - PHASE II																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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**WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1996-2007  
(\$000)**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>WASTEWATER METERING SYSTEM UPGRADE</b>																
10271 6800 Design In-house	TBS	Oct-94	Sep-96	\$10	\$0	\$10	\$10									\$0
10272 6001 Construction	TBS	Apr-96	Dec-98	\$390	60	330	75	75	75	75	300	\$0	30			0
Project Total:				\$400	\$60	\$340	\$85	\$75	\$75	\$75	\$310	\$30	\$0	\$0	\$0	\$0
<b>ASHLAND EXTENSION SEWER</b>																
10286 6187 Planning/Design	TBS	Sep-98	Jun-2003	\$1,000	\$0	\$1,000					\$0		\$200	\$350	\$300	150
10297 4228 Land Acquisition	TBS	Nov-98	Mar-2004	\$5	0	5	5				5					0
Project Total:				\$1,005	\$0	\$1,005	\$5	\$0	\$0	\$0	\$5	\$0	\$200	\$350	\$300	\$150
<b>SYSTEM MASTER PLAN INTERCEPTORS</b>																
10287 6188 Planning/Design	TBS	Sep-98	Oct-2003	\$2,722	\$0	\$2,722										822
10288 6189 Mystic Valley Sewer Sect. 153	TBS	May-2005	May-2007	\$1,026	0	1,026					\$0	\$250	\$550	\$550	\$550	1,026
10289 6190 Revere Branch Sect. 82	TBS	May-2005	May-2007	\$3,086	0	3,086					0	0	0	0	0	3,086
10290 6191 Neponset Valley Sec. 15-21	TBS	May-2005	May-2007	\$8,336	0	8,336					0	0	0	0	0	8,336
10291 6192 Cambridge Branch 23-25	TBS	May-2005	May-2007	\$3,742	0	3,742					0	0	0	0	0	3,742
10292 6193 Malden Branch Sect. 65 & 66	TBS	May-2005	May-2007	\$922	0	922					0	0	0	0	0	922
Project Total:				\$19,734	\$0	\$19,734	\$0	\$0	\$0	\$0	\$0	\$250	\$650	\$550	\$550	\$17,834
<b>CORROSION AND ODOR CONTROL STUDY</b>																
10275 6137 Planning/Study	TBS	Jan-97	Jan-99	\$685	\$142	\$515	\$203	\$72	\$57	\$47	\$379	\$164				\$0
Project Total:				\$685	\$142	\$515	\$203	\$72	\$57	\$47	\$379	\$164	\$0	\$0	\$0	\$0
<b>WASTEWATER FACILITIES REHABILITATION</b>																
10281 6166 Inventory and Evaluation	TBS	Nov-97	Feb-2000	\$1,667	\$0	\$1,667			\$200	\$250	\$450	\$1,100	\$117			\$0
10298 6229 Design and Construction	TBS	Oct-2000	Oct-2006	\$1,884	0	1,884					0	300	700	200	684	
Project Total				\$3,551	\$0	\$3,551	\$0	\$0	\$200	\$250	\$450	\$1,100	\$417	\$700	\$200	\$684

WASTEWATER IMPROVEMENT PROGRAM CAPITAL EXPENDITURE FORECAST FY 1998-2007 (\$000)																
PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
WEST ROXBURY TUNNEL																
10299 6230 Inspection	TBS	Apr-98	Sep-98	\$262	\$0	\$262				\$50	\$50	\$212				\$0
10300 6231 Engineering Report	TBS	Feb-99	May-99	\$61	0	61				0	61	0				0
Project Total				\$323	\$0	\$323	\$0	\$0	\$0	\$50	\$50	\$273	\$0	\$0	\$0	\$0
WASTEWATER CENTRAL MONITORING																
10301 6232 Planning	TBS	Nov-97	Nov-98	\$600	0	600	\$0	\$50	\$150	\$175	\$375	\$225				\$0
Project Total				\$600	\$0	\$600	\$0	\$50	\$150	\$175	\$375	\$225	\$0	\$0	\$0	\$0
FINAL PAYMENTS & RELEASE OF RETAINAGE																
10134 5360 Design - East Boston	Metcalf & Eddy Whitman & Howard			\$1,976	\$2,181	(\$205)										\$0
10011 5399 Study/Design - Metering				1,337	1,219	118										0
10014 5395 Construction 3 - Metering				984	984	0	116									0
10016 5301 Purchase - Metering				15	15	0	0									0
10015 5464 Easements - Metering				2	2	0	0									0
10017 5415 Printing				0	0	0										0
10135 5361 RI - East Boston				4,075	4,075	0										0
10140 5366 Const-Nth Met Sewer				5,747	5,747	0										0
10152 5355 Design/RI - Charlestown	CDM			3,772	3,772	0										0
10153 5357 Const. - Charlestown	White Contracting			25,274	25,274	0										0
10158 5356 Haz Mat Disposal - Charles.	ENSR Consulting			3,798	3,798	0										0
10160 5391 Hazardous Waste NOR	ERM New England			367	367	0										0
10161 5827 Litigation Asst. - Charlestown				131	131	0										0
Project Total:				\$47,478	\$47,565	(\$87)	(\$87)	\$0	\$0	\$0	\$87	\$0	\$0	\$0	\$0	\$0
SUBTOTAL: INTERCEPTION & PUMP.																
				\$430,545	\$187,755	\$242,762	\$9,478	\$6,775	\$4,137	\$6,033	\$26,423	\$12,888	\$41,299	\$46,520	\$55,654	\$49,259

**WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(0000)

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>B. TREATMENT</b>																
<b>REMOTE HEADWORKS REHABILITATION</b>																
17812 5469 Rehab - Constr 1	Sequela Constr	Jul-93	Dec-94	\$112	\$112	\$0					\$0					\$0
17815 5413 Rehab - Design 2/R	Anderson-Nichols	Nov-94	Mar-98	\$158	115	43			8		43					0
17813 5480 Rehab - Constr 2	TBS	Sep-96	Mar-98	\$641	150	491		20	170	121	491					0
17816 5414 Rehab - Constr 3	Soucy Wire & Iron	Apr-96	Jun-98	\$1,116	394	722		200	275	297	672	50				0
17814 5962 Technical Assistance	TBS	Jul-93	Apr-97	\$101	101	0		100			0					0
17817 6039 Elevator Rehab - Design	Bayside Engineering	Feb-96	Jul-98	\$73	45	28			10	13	23	5				0
17817 6039 Elevator Rehab - Constr	TBS	Aug-97	Jul-98	\$1,367	0	1,367		50	550	600	1,200	167				0
<b>Project Total:</b>				<b>\$3,568</b>	<b>\$917</b>	<b>\$2,651</b>	<b>\$220</b>	<b>\$335</b>	<b>\$964</b>	<b>\$910</b>	<b>\$2,429</b>	<b>\$222</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>BOSTON HARBOR</b>																
<b>PERFORMANCE CERTIFICATION</b>																
19139 0068 Phase I	Metcalfe & Eddy	May-96	Oct-97	\$600	\$426	\$174		\$74	\$0	\$0	\$174					\$0
19148 6167 Phase II	TBS	Mar-98	Sep-99	\$600	0	600				70	70	400	130			0
19151 6194 Phase III	TBS	Jun-2000	Aug-2001	\$350	0	350					0			200	150	0
<b>Project Total:</b>				<b>\$1,550</b>	<b>\$426</b>	<b>\$1,124</b>	<b>\$100</b>	<b>\$74</b>	<b>\$0</b>	<b>\$70</b>	<b>\$244</b>	<b>\$400</b>	<b>\$130</b>	<b>\$200</b>	<b>\$150</b>	<b>\$0</b>
<b>ONGOING CAPITAL IMPROVEMENTS</b>																
<b>DEER ISLAND TREATMENT PLANT</b>																
<b>DEER ISLAND AS-NEEDED DESIGN/CS/R</b>																
19154 3233 Contract Services	TBS	Jul-98	Jun-2000	\$500	\$0	\$500		\$0	\$0	\$0	\$0	\$250	\$250			\$0
<b>Project Total</b>				<b>\$500</b>	<b>\$0</b>	<b>\$500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$250</b>	<b>\$250</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>DEER ISLAND CONSTRUCTION SERVICES CONTRACTS</b>																
19155 6234 Construction - HVAC	TBS	Jul-97	Jun-99	\$150	\$0	\$150		\$100	\$50	\$0	\$150					\$0
19156 6235 Construction - Plumbing	TBS	Jul-97	Jun-99	\$150	0	150		100	50	0	150					0
19157 6236 Construction - Electrical	TBS	Jul-97	Jun-99	\$150	0	150		100	50	0	150					0
19158 6237 Construction - Site Work	TBS	Jul-97	Jun-99	\$150	0	150		100	50	0	150					0
19170 6389 System Modification	TBS	Jul-97	Jun-99	\$900	0	900		75	50	25	275	625				0
<b>Project Total</b>				<b>\$1,500</b>	<b>\$0</b>	<b>\$1,500</b>	<b>\$475</b>	<b>\$250</b>	<b>\$25</b>	<b>\$125</b>	<b>\$875</b>	<b>\$625</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$000)**

PROJECT	Project Participants	Notice to Proceed Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>ON-SITE GENERATION OF SODIUM HYPOCHLORITE</b>															
19159 6238 Design/CS/RI	TBS	Dec-98 May-99	\$2,232	\$0	\$2,232	\$0	\$0	\$0	\$0	0	\$1,400	\$600	\$232		\$0
19160 6239 Construction	TBS	Jan-2000 Jun-2000	\$13,243	0	13,243	0	0	0	0	0	0	12,000	1,243	0	0
<b>Project Total</b>			<b>\$15,475</b>	<b>\$0</b>	<b>\$15,475</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,400</b>	<b>\$12,600</b>	<b>\$1,475</b>	<b>\$0</b>	<b>\$0</b>
<b>DEER ISLAND COASTAL PROTECTION</b>															
19161 6240 Coastal Protection	TBS	TBD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Project Total</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>DEER ISLAND PLANT- WIDE SYSTEMS</b>															
19162 6241 DISC Application	TBS	Jun-96 May-99	\$250	\$0	\$250	\$0	\$40	\$25	\$50	\$115	\$135	\$0	\$0	\$0	\$0
<b>Project Total</b>			<b>\$250</b>	<b>\$0</b>	<b>\$250</b>	<b>\$0</b>	<b>\$40</b>	<b>\$25</b>	<b>\$50</b>	<b>\$115</b>	<b>\$135</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>DEER ISLAND DRY STORAGE WAREHOUSE</b>															
18945 6196 Design	TBS	Jul-97 Jun-99	\$600	\$0	\$600	\$0	\$0	\$0	\$150	150	\$450	\$0			\$0
19152 6197 Construction	TBS	Jun-99 Mar-2002	\$3,600	0	3,600	0	0	0	0	0	0	540	1,990	1,080	0
<b>Project Total</b>			<b>\$4,200</b>	<b>\$0</b>	<b>\$4,200</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$150</b>	<b>\$150</b>	<b>\$450</b>	<b>\$540</b>	<b>\$1,990</b>	<b>\$1,080</b>	<b>\$0</b>
<b>CLINTON LANDFILL LINER REPAIR</b>															
19163 6242 Design	TBS	Jul-97 Sep-98	\$75	\$0	\$75	\$0	\$0	\$0	\$0	0	\$75				\$0
19164 6243 Construction	TBS	Oct-97 Mar-99	\$325	0	325	0	0	0	0	0	325	0			0
<b>Project Total</b>			<b>\$400</b>	<b>\$0</b>	<b>\$400</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$400</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

WASTEWATER IMPROVEMENT PROGRAM CAPITAL EXPENDITURE FORECAST FY 1988-2007 (\$000)																
PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
FINAL PAYMENTS & RELEASE OF RETAINAGE																
19063 5440 Design/CS - Clinton	CDM			\$4,116	\$4,116	\$0					\$0					0
19096 5561 NI Immed Design				1233	1,211	22	22				22					
Project Total:				\$5,349	\$5,327	\$22	\$22	\$0	\$0	\$0	\$22	\$0	\$0	\$0	\$0	\$0
SUBTOTAL: TREATMENT				\$32,792	\$6,670	\$26,122	\$817	\$699	\$1,014	\$1,305	\$3,635	\$3,882	\$13,520	\$3,655	\$1,230	\$0

**BOSTON HARBOR PROJECT  
CAPITAL EXPENDITURE FORECAST FY 1998 - 2007  
(1000)**

**D.I. PRIMARY & SECONDARY TREATMENT FACILITY**

PROJECT		Notice To Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru 12/31/97	Projected Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>FACILITIES PLANNING</b>																
17851	5540 -- Surveying			\$15	\$15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18821	5526 -- Facilities Plan			16,518	16,518	0	0	0	0	0	0	0	0	0	0	0
Phase Total:				\$16,533	\$16,533	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>SITE FACILITIES CONSTRUCTION</b>																
18020	5536 CP-020	Dec - Tam	Jan-90	\$518	\$518	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18021	5599 CP-021	Aug-89	Jan-90	4,617	4,617	0	0	0	0	0	0	0	0	0	0	0
18022	5601 CP-022	Jan-90	Nov-91	17,107	17,107	0	0	0	0	0	0	0	0	0	0	0
18023	5601 CP-022	Jan-90	Nov-91	5,713	5,713	0	0	0	0	0	0	0	0	0	0	0
18024	5740 CP-023	Jan-90	Nov-91	48,343	48,343	0	0	0	0	0	0	0	0	0	0	0
18027	5728 CP-027	Jan-90	Apr-92	48,343	48,343	0	0	0	0	0	0	0	0	0	0	0
18027	5728 CP-027	Jan-90	Apr-92	48,343	48,343	0	0	0	0	0	0	0	0	0	0	0
18028	5841 CP-028	Dec-91	Sep-92	1,970	1,970	0	0	0	0	0	0	0	0	0	0	0
18030	5640 CP-030	Aug-90	Dec-91	14,077	14,077	0	0	0	0	0	0	0	0	0	0	0
18040	5739 CP-040	Dec-91	Jun-94	16,758	16,758	0	0	0	0	0	0	0	0	0	0	0
18042	5491 CP-042	Jul-99	Dec-99	250	250	0	0	0	0	0	0	0	0	0	0	0
18042	5491 CP-042	Jul-99	Dec-99	250	250	0	0	0	0	0	0	0	0	0	0	0
18044	6383 CP-048	Feb-90	Jan-91	38,670	38,670	0	0	0	0	0	0	0	0	0	0	0
18044	6201 CP-044	Final Paving and Site Completion	Jan-90	25,470	25,470	0	0	0	0	0	0	0	0	0	0	0
18049	5719 CP-049	Hazardous Mtl Rem Ph I	Mar-88	31,780	31,780	0	0	0	0	0	0	0	0	0	0	0
18050	5729 CP-050	Hazardous Mtl Rem Ph II	Jun-94	7,366	7,366	0	0	0	0	0	0	0	0	0	0	0
18050	5729 CP-050	Hazardous Mtl Rem Ph II	Jun-94	1,547	1,547	0	0	0	0	0	0	0	0	0	0	0
18142	6098 CP-051	IBS	Apr-96	1,910	1,910	0	0	0	0	0	0	0	0	0	0	0
18145	5637 CP-055	Supply & Del. Concrete	Apr-96	11,896	9,079	3,617	0	0	0	0	0	0	0	0	0	0
18145	5637 CP-055	Supply & Del. Concrete	Apr-96	11,896	9,079	3,617	0	0	0	0	0	0	0	0	0	0
25823	5648 CP-005	D.I. Sludge Transfer Fac	Oct-90	3,896	3,896	0	0	0	0	0	0	0	0	0	0	0
Phase Total:				\$233,888	\$171,082	\$62,806	\$481	\$2,476	\$1,938	\$6,866	\$11,771	\$37,411	\$10,334	\$3,280	\$0	\$0
<b>PRETREATMENT &amp; PRIMARY CONSTRUCTION</b>																
18101	5707 CP-101	North System Tunnels	Dec-90	\$20,625	\$20,625	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18102	5722 CP-102	North Main Pump Station	Jun-91	95,574	87,593	8,381	4,141	4,240	0	0	0	0	0	0	0	0
18103	5720 CP-103	North System Headworks	May-91	97,686	96,986	700	700	0	0	0	0	0	0	0	0	0
18104	5733 CP-104	South System Pump Station	Nov-91	43,291	41,738	1,553	369	513	466	205	1,553	0	0	0	0	0
18105	5700 CP-105	Primary Clarifier Bldgs A&B	Dec-94	100,196	100,196	0	0	0	0	0	0	0	0	0	0	0
18151	5541 CP-151	George Hyman Interlocking Tank East	Mar-92	15,577	15,577	0	0	0	0	0	0	0	0	0	0	0
18151	5541 CP-151	Interlocking Tank East	Mar-92	15,577	15,577	0	0	0	0	0	0	0	0	0	0	0
18152	5650 CP-152	Nut Island Headworks	Jul-92	13,666	62,315	10,493	4,715	3,445	2,336	0	10,493	0	0	0	0	0
18153	5639	Nut Island HW Equip	Sep-88	347	347	0	0	0	0	0	0	0	0	0	0	0
18153	5639	Nut Island HW Equip	Sep-88	347	347	0	0	0	0	0	0	0	0	0	0	0
18154	5454 CP-160	Cancl. D. I. Mods Ph. I	Mar-91	10,568	10,023	535	225	125	110	75	535	0	0	0	0	0
19150	6172 CP-170	Concrete Linings & Coatings Ph I	May-97	15,999	1,083	14,916	3,120	1,040	0	1,080	5,240	5,400	4,276	0	0	0
Phase Total:				\$687,895	\$650,136	\$47,759	\$17,246	\$11,086	\$4,322	\$2,569	\$35,223	\$8,260	\$4,276	\$0	\$0	\$0

**BOSTON HARBOR PROJECT  
CAPITAL EXPENDITURE FORECAST FY 1998 - 2007**  
(100)

PROJECT	Project Participants	Notice To Proceed	Substant. Complete	Total Contract Amount	Projected Payments Balance Thru FY97	Remaining Balance	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>SECONDARY CONSTRUCTION</b>																
18201 5743 CP-201 Permanent Pilot Plant	Peabody	Dec-91	Dec-94	\$11,942	\$11,942	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18202 5484 CP-202 Secondary Reactor Btry A&B	J.F. White/PKF	Nov-92	Apr-97	119,221	119,914	1,307	943	364	0	0	1,307	0	0	0	0	0
18203 5744 CP-203 Secondary Clarifier Btry A&B	J.F. White/PKF	Oct-97	Oct-97	153,328	145,598	7,770	4,050	2,495	815	410	7,770	0	0	0	0	0
18204 5745 CP-204 Secondary Clarifier Btry B	J.F. White/PKF	Aug-92	Aug-92	45,057	45,057	0	0	0	0	0	0	0	0	0	0	0
18205 5804 CP-205 Water Storage Tank	R. Zoppo	Jan-95	Jan-95	4,051	4,051	256	256	0	0	0	256	0	0	0	0	0
18206 5804 CP-205 Water Storage Tank	R. Zoppo	Jan-95	Jan-95	4,051	4,051	256	256	0	0	0	256	0	0	0	0	0
18210 6040 CP-210 Ancil. D.I. Med. Ph II	R. Zoppo	Jan-96	Jan-96	4,100	2,352	1,748	644	437	364	303	1,744	0	0	0	0	0
18211 6180 CP-211 Ancil. D.I. Med. Ph III	TBS	Jul-97	Jul-99	22,978	0	22,978	1,626	2,626	1,626	2,626	8,504	8,502	5,972	0	0	0
18212 6384 CP-212 Ancil. D.I. Med. Ph IV	TBS	Jul-98	Aug-99	1,988	0	1,988	0	0	0	0	1,988	1,079	909	0	0	0
18241 5544 CP-241 Secondary C Reactor and Clarifier Btry	Walsh	Jul-93	Nov-96	36,948	35,223	1,525	186	186	186	186	744	781	0	0	0	0
18242 5544 CP-241 Secondary C Reactor and Clarifier Btry	Walsh	Jul-93	Nov-96	161,570	13,494	148,076	10,283	13,773	9,939	16,931	50,928	60,499	36,651	0	0	0
18270 5546 CP-280 Effluent Outfall Tunnel	Walsh	Aug-90	Dec-98	255,632	240,225	15,407	2,647	2,647	0	1,952	0	9,260	0	0	0	0
18283 5637 CP-282 Effluent Outfall Tunnel	Kw/Alcon/ny	Aug-90	Nov-92	77,088	77,088	0	0	0	0	0	0	6,144	0	0	0	0
18285 5724 CP-285 Eff. Off. Trl. Muck Proc&Disp	Cashman/Intb	Sep-91	Nov-94	14,449	13,958	491	491	0	0	0	491	0	0	0	0	0
18286 5898 CP-286 Eff. Off. Trl. Muck Proc&Disp	Cashman	Dec-94	Jul-97	17,454	17,446	308	123	123	62	0	308	0	0	0	0	0
Phase Total:				\$928,785	\$78,435	\$202,350	\$21,499	\$22,897	\$15,009	\$22,408	\$81,813	\$77,005	\$43,632	\$0	\$0	\$0
<b>ON-ISLAND RESIDUALS CONSTRUCTION</b>																
18301 5723 CP-301 Res Trt Fac Ph I Pri A,B,C&D	Prin/Estrn	Aug-91	Dec-95	\$214,359	\$213,781	\$578	\$578	\$0	\$0	\$0	\$578	\$0	\$0	\$0	\$0	\$0
18303 5493 CP-303 Res Trt Fac Ph I Sec A&B	Hymn	Oct-93	Jul-97	100,748	98,341	4,407	2,058	1,291	1,058	0	4,407	0	0	0	0	0
Phase Total:				\$315,107	\$310,122	\$4,985	\$2,636	\$1,291	\$1,058	\$0	\$4,985	\$0	\$0	\$0	\$0	\$0
<b>PERMANENT UTILITIES CONSTRUCTION</b>																
18401 5815 CP-401 Off Island Water Lines	Un/Glooso	Jan-93	Nov-95	\$14,671	\$14,416	\$255	\$255	\$0	\$0	\$0	\$255	\$0	\$0	\$0	\$0	\$0
18427 5710 CP-427 Mfr. 13.8" BULKHEAD QTY UHL	Un/Glooso	Jan-93	Nov-95	80,941	77,007	3,934	1,298	1,100	946	650	3,934	0	0	0	0	0
18428 5745 CP-428 On-Site Power Plant for DI	J.F. White/PKF	Jan-93	Oct-97	34,365	34,365	0	0	0	0	0	0	0	0	0	0	0
18431 5768 CP-431 BECO CTG	Beco	Jan-93	May-95	34,365	34,365	0	0	0	0	0	0	0	0	0	0	0
18450 5546 CP-450 Instrumentation & Cntrl Ph 1	Bailey	Jan-93	Oct-99	21,213	18,861	4,352	324	324	322	322	1,292	1,928	1,132	0	0	0
18460 5590 Facility Information System	Bailey	Jan-93	Aug-97	6,462	5,533	929	250	175	81	250	756	173	0	0	0	0
18452 5388 CP-452 Plant Communication System	Fischl&Moore	Jan-93	May-99	12,512	10,853	1,659	154	245	245	154	798	546	315	0	0	0
Phase Total:				\$191,409	\$180,280	\$11,129	\$2,221	\$1,845	\$1,593	\$1,376	\$7,035	\$2,647	\$1,447	\$0	\$0	\$0

**BOSTON HARBOR PROJECT  
CAPITAL EXPENDITURE FORECAST FY 1998 - 2007  
(\$000)**

PROJECT	Project Participants	Notice To Proceed	Substant, Complete	Total Contract Amount	Projected Remaining Balance		JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY'98	FY'99	FY'2000	FY'2001	FY'2002	BEYOND FY'2002
					Th. FY97	6/30/97										
<b>CONSTRUCTION SUPPORT SERVICES</b>	17979 5964 Technical Assistance	Jan-90	Dec-99	\$384	\$384	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	18429 5711 Construction Power	Jul-91	Dec-99	14,734	12,235	2,499	607	607	405	405	2,024	415	60	93	0	0
	18940 5468 Construction Water @ D.I.	Oct-94	Dec-99	2,375	2,110	265	39	38	13	12	102	61	0	0	0	0
	18425 5748 Interim Utilities	Mar-97	Dec-99	1,533	1,364	169	169	0	0	0	169	0	0	0	0	0
	18901 5516 CP-901 Construction Support Bldg	Sep-90	Jul-91	4,067	4,067	0	0	0	0	0	0	0	0	0	0	0
	18902 5516 CP-902 Switch	Nov-90	Jul-91	5,153	5,152	1	0	0	1	0	1	0	0	0	0	0
	18903 5595 CP-903 Fuel Facility	Jan-90	Sep-90	1,126	1,126	0	0	0	0	0	0	0	0	0	0	0
	18804 5592 CP-904 Fuel Supplier I	Jul-90	Aug-92	126	126	0	0	0	0	0	0	0	0	0	0	0
	18920 5586 CP-920 Fuel Supplier II	Jun-92	Aug-96	50	50	0	0	0	0	0	0	0	0	0	0	0
	19143 6121 CP-924 Fuel Supplier III	Aug-96	Nov-98	400	154	246	42	42	42	42	168	78	0	0	0	0
	18909 5009 CP-909 Security I	Oct-90	Nov-98	198	198	0	0	0	0	0	0	0	0	0	0	0
	18917 5715 CP-917 Security II	Nov-90	Dec-92	1,196	1,196	0	0	0	0	0	0	0	0	0	0	0
	18918 5715 CP-917 Security III	Jan-95	Dec-96	1,377	1,377	0	0	0	0	0	0	0	0	0	0	0
	18935 5689 CP-935 Security IV	Jul-95	Dec-96	1,377	1,377	0	0	0	0	0	0	0	0	0	0	0
	18942 6147 CP-942 Security V	Oct-90	Dec-99	2,444	1,898	2,240	204	204	204	204	816	816	0	0	0	0
	18910 5598 CP-910 Site & FRSA Maintenance I	Oct-90	Nov-92	1,898	1,898	0	0	0	0	0	0	0	0	0	0	0
	18931 5506 CP-931 Site & FRSA Maintenance II	Nov-92	Nov-94	2,443	2,443	0	0	0	0	0	0	0	0	0	0	0
	18937 5774 CP-938 Site & FRSA Maintenance III	Nov-94	Nov-96	3,255	3,255	0	0	0	0	0	0	0	0	0	0	0
	18938 5774 CP-938 Site & FRSA Maintenance IV	Nov-96	Nov-98	2,291	2,291	3,047	567	567	567	568	778	778	0	0	0	0
	18973 6347 CP-970 Site & FRSA Maintenance V	Dec-98	Dec-99	2,851	2,851	2,631	110	110	110	110	920	920	1,231	460	0	0
	18911 5697 CP-911 Trash Disposal	Jul-90	Jul-93	852	852	0	0	0	0	0	0	0	0	0	0	0
	18933 5844 CP-933 Trash Handling & Disposal I	Jun-95	Jun-95	948	948	0	0	0	0	0	0	0	0	0	0	0
	18938 6041 CP-938 Trash Handling & Disposal II	Jul-95	Jun-97	852	786	66	66	66	61	61	66	0	0	0	0	0
	18944 6161 CP-944 Trash Handling & Disposal III	Jul-97	Dec-99	546	0	546	62	62	61	61	246	166	134	0	0	0
	18972 5899 CP-972 Off-Site Maint & CSB Help	Dec-90	Jan-93	205	205	0	0	0	0	0	0	0	0	0	0	0
	18973 5899 CP-972 Off-Site Maint & CSB Help I	Feb-93	Feb-93	315	315	0	0	0	0	0	0	0	0	0	0	0
	18935 5792 CP-935 Off-Site Maint & CSB Help II	Feb-93	Feb-93	431	431	0	0	0	0	0	0	0	0	0	0	0
	18945 6179 CP-945 Off-Site Maint & CSB Help III	Feb-97	Feb-99	527	76	451	61	61	73	73	268	183	0	0	0	0
	18972 6348 CP-972 Off-Site Maint & CSB Help V	Feb-99	Dec-2000	383	0	383	0	0	0	0	0	80	192	111	0	0
	18950 5747 CP-950 Construction Support Labor	Aug-91	Aug-92	1,046	1,046	0	0	0	0	0	0	0	0	0	0	0
	18951 5520 CP-951 Const. Supt. Labor Ph. I	Aug-92	Jul-93	3,690	3,690	322	0	0	0	0	322	0	0	0	0	0
	18952 5463 CP-952 Const. Supt. Labor Ph. II	Jul-93	Jul-95	6,176	5,854	322	0	0	0	0	0	0	0	0	0	0
	18953 5463 CP-952 Const. Supt. Labor Ph. III	Aug-93	Jul-95	3,060	3,060	950	0	0	0	0	0	0	0	0	0	0
	18954 6348 CP-954 Const. Supt. Labor Ph. IV	Aug-95	Aug-97	3,000	3,000	375	375	375	375	375	1,500	1,100	400	0	0	0
	19137 6051 Construction Services	Sep-96	Sep-96	2,900	1,265	735	735	0	0	0	735	0	0	0	0	0
	18960 5538 CP-960 Const. Supt. Labor - Electrical	May-93	May-93	986	986	0	0	0	0	0	0	0	0	0	0	0
	18961 5539 CP-961 Const. Supt. Labor - Plumbing	Jun-94	Jun-96	572	572	0	0	0	0	0	0	0	0	0	0	0
	18962 5543 CP-962 Const. Supt. Labor - HVAC	Apr-94	Apr-96	409	409	0	0	0	0	0	0	0	0	0	0	0
	18970 6052 CP-963 Const. Supt. Labor Ph II-ELEC	Jul-95	Aug-96	993	993	0	0	0	0	0	0	0	0	0	0	0
	18971 6052 CP-963 Const. Supt. Labor Ph III-ELEC	Aug-96	Aug-96	1,063	1,063	480	60	60	60	60	240	240	0	0	0	0
	18985 6097 CP-965 Const. Supt. Labor Ph. II - HVAC	May-96	May-96	1,723	513	513	67	67	67	67	240	240	0	0	0	0
	19144 6135 CP-968 Const. Supt. Labor Ph III-ELEC	Aug-96	Jul-98	1,651	733	918	203	203	203	203	812	106	0	0	0	0
	18989 6350 CP-969 Const. Supt. Labor Ph IV-ELEC	Jul-98	Dec-2000	1,000	0	1,000	0	0	0	0	0	388	408	204	0	0
	18922 5717 CP-922 Off-Site Srv Rtd Serv&Asph Svp	Oct-90	Nov-92	134	134	0	0	0	0	0	0	0	0	0	0	0
	18932 5530 CP-932 Off-Site Srv Serv & Asph Svp II	Nov-92	Dec-94	589	589	0	0	0	0	0	0	0	0	0	0	0
	18933 5530 CP-932 Off-Site Srv Serv & Asph Svp III	Jan-95	May-97	610	472	138	80	58	0	0	138	163	0	0	0	0
	18946 5712 CP-946 Off-Site Srv Serv & Asph Svp IV	May-97	May-97	231	231	46	46	46	0	0	192	0	0	0	0	0
	18973 6351 CP-973 Off-Site Srv Serv & Asph Svp V	Jul-99	Dec-2000	431	0	431	0	0	0	0	0	288	140	0	0	0
	18913 5538B CP-913 Rodent Control	Jul-99	Jul-99	34	34	0	0	0	0	0	0	0	0	0	0	0
	18919 5736 CP-919 Rodent Control II	Sep-91	Sep-95	134	134	0	0	0	0	0	0	0	0	0	0	0
	18947 6066 CP-947 Rodent Control III	Jan-96	Jan-2000	41	19	22	3	2	2	3	10	8	4	0	0	0
Phase Total:				\$85,732	\$44,901	\$20,831	\$3,738	\$2,394	\$2,118	\$2,440	\$10,690	\$5,778	\$3,418	\$447	\$0	\$0

**BOSTON HARBOR PROJECT  
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(\$000)**

PROJECT			Project Participants	Notice To Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
CONSTRUCTION MANAGEMENT																		
18601	5535	—	PICM Services	Apr-88	Jun-91	\$18,354	\$18,354	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18602	5622	—	CM Services (90-88)	Aug-90	Dec-98	\$249,258	203,290	45,968	7,966	7,932	7,821	7,540	31,059	\$14,909	0	0	0	0
18603	5405	—	CM Services (99-2004)	Jan-99	Dec-2004	\$15,532	0	15,532	0	0	0	0	0	0	6,460	0	0	0
18604	5751	—	Facilities Training	Jul-88	Jun-98	3,575	2,473	1,102	55	55	55	55	220	195	687	0	0	0
18605	5496	—	Project Offices	Jul-88	Jun-98	6,083	5,782	301	76	75	75	75	301	0	0	0	0	0
18606	5482	—	Right Support Services	Jul-88	Jun-90	505	505	0	0	0	0	0	0	0	0	0	0	0
18607	5482	—	Computer Aided Design	Jul-88	Jun-90	505	505	0	0	0	0	0	0	0	0	0	0	0
18608	5482	—	Job Training	Jul-89	Sep-93	2,392	2,392	0	0	0	0	0	0	0	0	0	0	0
18609	5488	—	Vocational Career	Jul-90	Sep-93	63	63	0	0	0	0	0	0	0	0	0	0	0
18611	5611	—	Legal Lien Fees	Jan-89	Jun-93	63	63	0	0	0	0	0	0	0	0	0	0	0
18612	5483	—	Professional Services	Oct-89	Jun-2000	5,492	4,185	1,307	159	157	159	157	632	500	175	0	0	0
18613	5635	—	Insur Gen Lib	Jan-90	Jun-2000	2,334	780	1,554	268	0	0	500	768	277	186	323	0	0
18614	5636	—	Insur Builders Risk	Jan-90	Jun-2000	6,485	4,261	2,224	858	0	0	200	1,058	927	239	0	0	0
18615	5472	—	Marine Club	Jan-96	Jun-96	422	422	0	0	0	0	0	0	0	0	0	0	0
18616	5553	—	Johnson Higgins	Jan-90	Jun-96	84	84	0	0	0	0	0	0	0	0	0	0	0
18617	5553	—	Risk Mgmt/HSE	Jan-90	Jun-96	84	84	0	0	0	0	0	0	0	0	0	0	0
18620	5606	—	Lab Agree. Admin. Serv.	Jan-90	Jun-2000	3,078	2,301	777	45	43	43	43	174	24	36	0	0	0
18623	5713	—	Permit Fees	Dec-99	Jan-90	707	312	395	26	26	26	26	104	103	188	0	0	0
18624	5752	—	Outfall Admin	Aug-90	Jun-98	6,255	4,165	2,090	522	522	523	523	2,090	0	0	0	0	0
18625	5752	—	Outfall Permits	Aug-90	Jun-98	100	100	0	0	0	100	0	100	0	0	0	0	0
18626	5729	—	CP-28	Sep-88	Dec-99	9,450	148	9,302	0	0	0	0	0	8,000	1,302	0	0	0
18627	5729	—	Building Start-Up	Dec-95	Dec-95	3,500	636	3,864	364	0	0	0	364	0	0	0	0	0
18628	5748	—	Building Permits	Jul-91	Jul-91	3,500	2,194	1,306	206	206	206	206	822	0	0	0	0	0
18633	5459	—	Misc. Facility Support	Sep-91	Jun-2004	3,466	2,194	1,272	124	124	124	124	486	424	352	0	0	0
18634	5457	—	Winthrop Road Reconstruction	Aug-93	Aug-94	1,602	1,602	0	0	0	0	0	0	0	0	0	0	0
18635	5479	—	Winthrop Road Reconstruct	Aug-93	Aug-94	1,602	1,602	0	0	0	0	0	0	0	0	0	0	0
18636	5581	—	MBE/WBE Assistance	Jul-96	Dec-96	1	1	0	0	0	0	0	0	0	0	0	0	0
18638	5885	—	Construction Safety	Apr-92	Jun-99	1,914	1,120	794	525	39	39	39	642	152	0	0	0	0
18641	5744	—	FOIRO - Rolling Stock	Mar-93	Jun-99	4,810	1,874	2,936	608	608	607	607	2,430	506	0	0	0	0
18642	5730	—	FOIRO - Shop & Maint. Equip.	Mar-93	Jun-99	1,113	113	1,000	0	0	0	0	0	0	0	0	0	0
18643	5761	—	FOIRO - Lab. Equip.	Mar-93	Jun-99	1,771	111	1,660	144	144	0	0	261	372	0	0	0	0
18644	5762	—	FOIRO - Audio/Visual Supplies	Mar-93	Jun-99	2,526	2,254	272	0	0	0	0	0	272	0	0	0	0
18645	5763	—	FOIRO - Misc. Fit Out/Supplies	Mar-93	Jun-99	158	158	0	0	0	0	0	0	0	0	0	0	0
Phase Total:						1,377	1,589	(212)	(212)	0	0	0	(212)	0	0	0	0	0
Phase Total:						\$354,896	\$267,244	\$87,654	\$11,740	\$9,439	\$9,566	\$10,103	\$41,968	\$35,860	\$10,083	\$323	\$0	\$0
LEAD DESIGN SERVICES																		
18600	5534	—	LDE Services	Aug-88	Jun-98	\$87,011	\$84,020	\$2,991	\$762	\$745	\$742	\$742	\$2,991	\$0	\$0	\$0	\$0	\$0
18607	5487	—	Cadd I	Aug-88	Mar-93	5,475	5,475	0	0	0	0	0	0	0	0	0	0	0
18608	5487	—	Cadd II	Aug-88	Mar-93	5,475	5,475	0	0	0	0	0	0	0	0	0	0	0
18609	5487	—	Physical Services	Jul-89	Jun-99	3,354	2,473	1,081	153	153	154	154	614	467	0	0	0	0
18611	5575	—	Engineering Svc's During Construct	Mar-95	Oct-95	9,707	9,707	0	0	0	0	0	0	0	0	0	0	0
18614	5481	—	Phase Total:	Apr-88	Jun-99	9,707	9,707	0	0	0	0	0	0	0	0	0	0	0
Phase Total:						\$105,747	\$101,675	\$4,072	\$915	\$988	\$986	\$986	\$3,005	\$487	\$0	\$0	\$0	\$0

**BOSTON HARBOR PROJECT  
CAPITAL EXPENDITURE FORECAST FY 1998 - 2007  
(\$000)**

PROJECT	Project Participants	Notice To Proceed	Substant. Complete	Contract Amount	Projected Remaining Payments Balance Th. FY97 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>SITE FACILITY DESIGN</b>															
18501 5528 DP-1 Early Site Prep	Brent	Oct-88	Mar-89	\$3,174	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18507 5489 DP-7 Support Buildings Ph. I	Toulkous	Sep-90	Jan-96	6,553	70	70	0	0	0	0	0	0	0	0	0
18527 5529 DP-27 D.I. Haz Waste Eng Svcs	HMM Earthtech	Feb-90	May-95	2,805	2,805	0	0	0	0	0	0	0	0	0	0
18563 6049 DP-34 D.I. Haz Waste Eng Svcs II	Green Environment	May-95	Apr-98	502	265	237	48	48	48	192	45	0	0	0	0
<b>Phase Total:</b>				<b>\$15,134</b>	<b>\$12,827</b>	<b>\$307</b>	<b>\$118</b>	<b>\$48</b>	<b>\$48</b>	<b>\$262</b>	<b>\$45</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>PRETREATMENT &amp; PRIMARY DESIGN</b>															
18504 5532 DP-4 Nut/Island Headworks	Havens&Emers	Jun-90	Sep-98	\$8,844	\$8,613	\$231	\$71	\$50	\$50	\$221	\$10	\$0	\$0	\$0	\$0
18505 5494 DP-5 Inter-Island Tunnel	Sverdrip	Feb-89	Dec-97	5,230	4,941	289	164	125	0	289	0	0	0	0	0
18509 5529 DP-9 Primary Phase I	Malcom Pirnie	Jun-89	Oct-97	10,692	10,233	449	299	150	0	449	0	0	0	0	0
<b>Phase Total:</b>				<b>\$24,766</b>	<b>\$23,767</b>	<b>\$969</b>	<b>\$534</b>	<b>\$225</b>	<b>\$50</b>	<b>\$959</b>	<b>\$10</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>SECONDARY DESIGN</b>															
18506 5531 DP-6 Effluent Outfall Tunnel	Parsons	Feb-89	Oct-98	\$9,136	\$7,901	\$1,235	\$195	\$192	\$195	\$774	\$461	\$0	\$0	\$0	\$0
18518 5538 DP-18 Pilot Plant, I, Woods Design	Cydrup	Apr-93	Jun-97	5,016	4,301	715	234	231	250	715	0	0	0	0	0
18519 5503 DP-19 Pilot Plant, II, Woods Design	Malcom Pirnie	Jan-91	Dec-98	31,627	29,772	1,855	450	450	324	1,543	312	0	0	0	0
18528 5701 DP-28 Sec. Treat. Fac. Ph. 1&2	various	Jan-84	May-89	2,045	1,643	402	0	0	0	0	402	0	0	0	0
18529 5585 DP-29 Sec. Treat. Fac. Ph. 3	Melcalf & Eddy	Jun-95	Jun-2000	14,459	7,295	7,164	623	623	797	2,840	2,608	1,716	0	0	0
18540 5886 DP-40 Sec. Treat. Fac. Ph. 4															
<b>Phase Total:</b>				<b>\$62,708</b>	<b>\$51,337</b>	<b>\$11,371</b>	<b>\$1,502</b>	<b>\$1,496</b>	<b>\$1,666</b>	<b>\$5,872</b>	<b>\$3,381</b>	<b>\$3,118</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>ON-ISLAND RESIDUALS DESIGN</b>															
18513 5608 DP-13 Residuals Phase I	Black&Veatch	Nov-89	Mar-91	\$10,416	\$10,416	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18514 5738 DP-31 Res Proc PH I DSDC	Havens&Emers	Oct-91	Nov-96	6,266	6,266	0	0	0	0	0	0	0	0	0	0
18516 5738 DP-32 Res Proc PH I A	CampDresMickle	Jun-90	Apr-97	8,869	8,369	500	500	0	0	500	0	0	0	0	0
<b>Phase Total:</b>				<b>\$25,551</b>	<b>\$25,051</b>	<b>\$500</b>	<b>\$500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>PERMANENT UTILITIES DESIGN</b>															
18503 5524 DP-3 Elec Dist. Facilities	R.W. Beck	Feb-90	Apr-96	\$3,459	\$3,459	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18522 5512 DP-23 Elec & H.V. Underst. Trk	R.W. Beck	Jun-90	Dec-97	1,347	1,347	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18525 5530 DP-25 Plant I & C and Commun.	EMA	Jun-90	Dec-97	9,105	7,978	1,127	263	285	278	1,327	0	0	0	0	0
18534 5485 Rev/Che/Win Util. Line	R.W. Beck	Dec-88	Aug-92	3,644	3,644	0	0	0	0	0	0	0	0	0	0
<b>Phase Total:</b>				<b>\$37,668</b>	<b>\$35,194</b>	<b>\$2,474</b>	<b>\$763</b>	<b>\$732</b>	<b>\$492</b>	<b>\$2,474</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>CONSTRUCTION SUPPORT SERVICES DESIGN</b>															
18522 5607 DP-22 Const. Support Facil.	Lin Assoc.	Aug-89	Jun-90	\$1,216	\$1,216	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18524 5687 D.I. Design Services	various	Mar-95	Sep-97	875	590	285	185	100	0	285	0	0	0	0	0
<b>Phase Total:</b>				<b>\$2,091</b>	<b>\$1,806</b>	<b>\$285</b>	<b>\$185</b>	<b>\$100</b>	<b>\$0</b>	<b>\$285</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>PROJECT TOTAL:</b>				<b>\$3,095,902</b>	<b>\$2,638,410</b>	<b>\$457,492</b>	<b>\$64,088</b>	<b>\$55,527</b>	<b>\$38,076</b>	<b>\$405,943</b>	<b>\$170,962</b>	<b>\$75,127</b>	<b>\$4,560</b>	<b>\$0</b>	<b>\$0</b>

**BOSTON HARBOR PROJECT**  
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PROJECT		Project Participants	Notice To Proceed	Substant. Complete	Total Contract Amount	Projected Remaining Payments Balance Thru FY97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
WATER TRANSPORTATION FACILITIES																
<b>DEER ISLAND</b>																
18001	5503 CP-001	Marine Facilities @ DI	Jul-88	Feb-90	\$27,694	\$27,694	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18061	5517	D.I. Pier Sheet Pile	Jul-88	Feb-90	0	0	0	0	0	0	0	0	0	0	0	0
18062	5518	D.I. Pier Sheet Pile	Jul-88	Feb-90	4,198	4,198	0	0	0	0	0	0	0	0	0	0
18067	5558	Res. Insp. DI, Per. Fac.	Mar-91	Nov-91	12	12	0	0	0	0	0	0	0	0	0	0
18068	5497	C.E. Macquire	Jul-88	Feb-90	1,311	1,311	0	0	0	0	0	0	0	0	0	0
Phase Total:					\$34,395	\$34,395	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>FORE RIVER STAGING AREA (FRSA)</b>																
18002	5524 CP-002	On-Shore Marine Facility	Apr-89	Apr-90	\$6,966	\$6,966	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18010	5854 CP-010	Asbestos & Elec Cbl Rmvl, FRSA	Apr-90	Jul-90	423	423	0	0	0	0	0	0	0	0	0	0
18011	5855	Remediation @ FRSA	Apr-90	Aug-90	240	240	0	0	0	0	0	0	0	0	0	0
18012	5514 CP-012	Remediation @ FRSA	Apr-90	Aug-90	5,839	5,839	0	0	0	0	0	0	0	0	0	0
18072	5879	FRSA Railroad	Apr-90	Jul-92	5,839	5,839	0	0	0	0	0	0	0	0	0	0
18073	5880	Land FRSA	Jan-88	Dec-90	50,895	50,895	0	0	0	0	0	0	0	0	0	0
18073	5845	FRSA Utilities	Jan-92	Jan-99	886	494	392	51	51	51	204	188	0	0	0	0
Phase Total:					\$66,019	\$65,627	\$392	\$51	\$51	\$51	\$204	\$188	\$0	\$0	\$0	\$0
<b>SQUANTUM POINT</b>																
18005	5631 CP-005	Dredging at Squantum Point	Jan-90	Feb-90	\$417	417	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18013	5598 CP-013	Per Ferry @ Squantum Pk	May-90	Jul-90	1,451	1,451	0	0	0	0	0	0	0	0	0	0
18016	5724 CP-014	Asbestos - Reverse Sugar	Aug-90	May-91	1,960	1,960	0	0	0	0	0	0	0	0	0	0
18046	5725 CP-016	Upland Facility @ Squantum Pt	Aug-90	Dec-94	1,847	1,847	0	0	0	0	0	0	0	0	0	0
18064	5732	Sq. Pt. Maintenance	Jan-91	Dec-99	265	265	26	26	26	26	96	75	97	0	0	0
18618	5477	Squantum Point Lease	Apr-91	Dec-99	3,261	3,261	0	0	0	0	0	0	0	0	0	0
Phase Total:					\$5,996	\$5,718	\$268	\$26	\$26	\$26	\$96	\$75	\$37	\$0	\$0	\$0
<b>REVERSE SUGAR</b>																
18009	5725 CP-009	Christwn Demo, Rehab & Fry Trm	Feb-92	Aug-92	\$2,427	\$2,427	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18063	5895	Asbestos - Reverse Sugar	Dec-91	Dec-91	483	483	0	0	0	0	0	0	0	0	0	0
18619	5578	Reverse Sugar Lease	Aug-88	Oct-94	2,234	2,234	0	0	0	0	0	0	0	0	0	0
Phase Total:					\$5,144	\$5,144	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

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**CAPITAL EXPENDITURE FORECAST FY 1998 - 2007**  
**(\$'000)**

PROJECT		Project Participants	Notice To Proceed	Substant. Complete	Total Contract Amount	Projected Remaining Payments Balance Thru: FY97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
NUT ISLAND																
18015	5718 CP-015 N.I. Dredging	Great Lake	Jan-91	Feb-91	\$243	\$243	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18069	5533 Res. Insp. - N.I.	C.E. Maquire	Jan-89	Mar-90	588	588	0	0	0	0	0	0	0	0	0	0
18150	5515 CP-150 Marine Facilities @ NI	Sciaba	Jan-89	Mar-90	6,548	6,548	0	0	0	0	0	0	0	0	0	0
Phase Total:					\$7,379	\$7,379	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DESIGN																
18520	5586 DP-20 WaterLand Trans. Fac.	Fred Harris	Jun-89	Dec-90	\$1,348	\$1,348	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18527	5533 CP-827 Design - On Shore	Person/Brink	Oct-87	May-90	2,496	2,496	0	0	0	0	0	0	0	0	0	0
18533	5521 Design - On Island	C.E. Maquire	Apr-87	Jun-88	1,639	1,639	0	0	0	0	0	0	0	0	0	0
18535	5735 DP-60 St. Pl. Inters. Design	Quincy	Mar-91	Jun-93	399	399	0	0	0	0	0	0	0	0	0	0
18537	5764 DP-37 D.I. Pier Improvements	F.R. Harris	May-92	Dec-92	63	63	0	0	0	0	0	0	0	0	0	0
Phase Total:					\$5,945	\$5,945	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WTS OPERATIONS																
18908	5528 CP-808 Bus Transportation System	Modern	Jul-90	Dec-97	\$23,005	\$22,005	\$1,000	\$501	\$499	\$0	\$0	\$1,000	\$0	\$0	\$0	\$0
18927	5353 CP-827 Bus Transport Sys 98-00	TBS	Dec-88	Dec-2000	3,497	0	3,497	0	1,600	0	318	658	1,175	561	0	0
18925	6354 CP-925 WTS ROBO Transport Op 88-97	Bos Tow/Tra	Nov-89	Dec-97	38,523	35,323	3,200	1,600	0	772	3,200	3,060	2,587	1,540	0	0
18918	5891 CP-918 WTS-Personl Trans Op 88-97	Modern	Dec-89	Dec-97	31,969	30,315	1,654	833	821	0	772	1,654	0	0	0	0
18926	5355 CP-926 WTS-Personl Trans Op 98-00	TBS	Dec-97	Dec-2000	4,777	0	4,777	0	596	596	1,192	1,866	1,348	371	0	0
Phase Total:					\$110,522	\$87,643	\$22,879	\$2,934	\$2,920	\$1,686	\$9,226	\$6,121	\$5,060	\$2,472	\$0	\$0
OTHER WTS																
17980	5865 Technical Assistance WTS	WTS	Apr-90	On-Going	\$308	\$308	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17989	5525 Fac. Plan/ER	C.E. Maquire	Jan-88	Dec-90	1,975	1,975	0	0	0	0	0	0	0	0	0	0
17991	5888 Appraisal Service	Leggatt/McCall	Jul-88	Mar-89	25	25	0	0	0	0	0	0	0	0	0	0
17992	5889 WTS ROBO Treat/Rev.	NUS	Mar-89	Mar-99	27	27	0	0	0	0	0	0	0	0	0	0
17994	5595 Historical Surveys	Boston Aft	Jan-88	Dec-90	341	341	0	0	0	0	0	0	0	0	0	0
18007	5593 CP-407 Bus Term & Pkg @ Suffolk Downs	Reynolds	Aug-90	May-91	49	49	10	10	10	10	39	0	0	0	0	0
18019	5836 Rows Wharf Permit	Commer Maritime	Aug-92	Jun-98	10	39	10	10	10	9	39	0	0	0	0	0
18070	5887 Bus Sites Appraisal	Mendilth	May-89	Mar-90	18	18	0	0	0	0	0	0	0	0	0	0
18022	5627 Suffolk Downs Land Lease	Belle Isle	May-89	Mar-99	6,791	5,539	1,252	189	184	178	750	426	76	0	0	0
18018	5455 CP-948 Suffolk Isle	Chapman	Jan-98	Dec-97	540	342	198	99	99	0	198	0	0	0	0	0
18049	6402 CP-849 Maintenance Dredging II	TBS	Jan-98	Dec-99	552	552	0	0	138	138	276	0	0	0	0	0
Phase Total:					\$11,460	\$9,419	\$2,041	\$288	\$303	\$337	\$1,263	\$702	\$76	\$0	\$0	\$0
PROJECT TOTAL:					\$249,950	\$224,270	\$25,660	\$3,307	\$3,288	\$2,098	\$10,789	\$7,086	\$5,233	\$2,472	\$0	\$0
SUB-TOTAL: BHP					\$3,345,765	\$2,862,860	\$403,072	\$67,395	\$58,825	\$40,774	\$50,638	\$217,632	\$178,048	\$80,360	\$7,032	\$0
TOTAL: TREATMENT					\$3,378,544	\$2,869,350	\$509,194	\$68,212	\$59,524	\$41,768	\$51,843	\$221,467	\$181,930	\$93,880	\$10,687	\$1,330

**WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$'000)**

	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>C. RESIDUALS</b>																
<b>RESIDUALS MANAGEMENT FACILITIES</b>																
25941	5867 Des/CS Pelletizing 1															
25948	5869 Fast Track Equip. Prepurch	Aug-83	Feb-97	\$5,942	\$5,061	\$881	\$175	\$175	\$175	\$175	\$700	\$181				\$0
26055	6009 Fast Track Equip. Installat	Aug-94	Jun-95	\$302	302	0					0					0
26056	6010 Outside Construction	Oct-94	Apr-96	\$1,457	1,457	0					0					0
26057	6011 Inside Equip. Prepurchase	Jan-96	Mar-98	\$13,158	11,294	1,864	1,800	264	0		1,864					0
26058	6012 Resid Research	May-95	Jul-98	\$4,702	4,657	45	45				45					0
25961	5843 Resid Research	Nov-96	Jun-99	\$24,365	3,352	21,013	8,542	5,022	3,152	1,544	18,260	2,753				0
26059	6083 License Fee	Aug-90	Apr-97	\$443	443	0					0					0
26060	6373 Cogen Study	Jan-2001	Jan-2003	\$675	0	675			63	63	126			225	225	0
25948	5831 Royalty	Jan-98	Dec-98	\$250	0	250					0					0
		Feb-96	Jun-97	\$562	562	0					0	124				0
<b>Project Total:</b>				<b>\$51,856</b>	<b>\$27,128</b>	<b>\$24,728</b>	<b>\$10,362</b>	<b>\$5,461</b>	<b>\$3,390</b>	<b>\$1,782</b>	<b>\$20,895</b>	<b>\$3,058</b>	<b>\$0</b>	<b>\$225</b>	<b>\$225</b>	<b>\$225</b>

<b>FINAL PAYMENT &amp; RELEASE OF RETAINAGE</b>																
25926	5969 Technical Assistance			\$1,294	\$1,294	\$0					\$0					\$0
25917	5852 EIR/DS/FP/CS/RI - Pellet			15,730	15,730	0					0					0
25919	5845 Constr-FSRA Facility			62,761	62,761	0					0					0
25920	5846 Constr-FSRA Pier			4,201	4,201	0					0					0
25936	5864 Facilities Planning			9,630	9,630	0					0					0
25969	5853 Sdy-Alternative Lndfl			250	250	0					0					0
25972	5870 Emergency Plan			94	94	0					0					0
25943	5872 Design Landfill 1			4,426	4,426	0					0					0
<b>Project Total:</b>				<b>\$98,386</b>	<b>\$98,386</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Sub-total: RESIDUALS</b>																
				<b>\$150,242</b>	<b>\$125,514</b>	<b>\$24,728</b>	<b>\$10,362</b>	<b>\$5,461</b>	<b>\$3,390</b>	<b>\$1,782</b>	<b>\$20,895</b>	<b>\$3,058</b>	<b>\$0</b>	<b>\$225</b>	<b>\$225</b>	<b>\$225</b>

**WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$000)**

PROJECT	Project Participants	Notice to Proceed	Substant Complete	Total Contract Amount	Projected Project Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>D. CSO's</b>																
<b>MWRA MANAGED PROJECTS</b>																
<b>NORTH DORCHESTER BAY CONSOLIDATION CONDUIT, RESERVED CHANNEL CONSOLIDATION CONDUIT, AND RESERVED CHANNEL PUMPING FACILITY</b>																
32660 6220 Design/CS/RI	TBS	Jul-97	Mar-2005	26,403	0	26,403	333	1,219	1,385	1,774	4,711	6,996	2,881	1,883	3,564	6,378
32661 6244 Construction 1	TBS	Sep-2000	Mar-2003	62,112	0	62,112								23,603	26,708	11,801
32662 6245 Construction 2	TBS	Sep-2000	Mar-2003	38,515	0	38,515					0	0		16,561	16,561	5,392
32663 6246 Construction 3	TBS	Feb-2003	Mar-2005	19,520	0	19,520					0					19,520
Project Total				\$146,550	\$0	\$146,550	\$333	\$1,219	\$1,385	\$1,774	\$4,711	\$6,996	\$2,881	\$42,047	\$46,834	\$43,091
<b>STONY BROOK SCREENING AND DISINFECTION FACILITY</b>																
32667 6250 Design/CS/RI	TBS	Jul-98	Mar-03	3,240	0	3,240					0	733	898	392	691	526
32668 6251 Construction #1	TBS	Mar-01	Mar-03	16,199	0	16,199					0	\$733	\$898	\$1,055	\$7,946	\$3,068
Project Total				\$19,439	\$0	\$19,439	\$0	\$0	\$0	\$0	\$0	\$733	\$898	\$5,377	\$8,637	\$3,594
<b>CAMBRIDGE CAM005 HYDRAULIC RELIEF CHARLESTOWN BOS017 HYDRAULIC RELIEF</b>																
32692 6395 Design/CS/RI	TBS	Jul-97	Aug-2000	590	0	590	3	16	38	50	107	181	266	31	5	0
32689 6252 Construction #1	TBS	Mar-99	Aug-2000	2,949	0	2,949	\$3	\$16	\$38	\$50	\$107	\$181	\$2,861	\$385	\$5	0
Project Total				\$3,539	\$0	\$3,539	\$3	\$16	\$38	\$50	\$107	\$181	\$2,861	\$385	\$5	\$0
<b>INTERCEPTION CONNECTION (BOS032)</b>																
32670 6253 Design/CS/RI	TBS	Jan-98	Jun-00	185	0	185					91	46	48			0
32671 6254 Construction	TBS	Jul-99	Jun-00	964	0	964	\$0	\$91	\$0	\$0	\$0	\$462	\$482	\$0	\$0	\$0
Project Total				\$1,149	\$0	\$1,149	\$0	\$91	\$0	\$0	\$91	\$528	\$530	\$0	\$0	\$0
<b>EAST BOSTON BRANCH SEWER RELIEF</b>																
32673 6256 Design/CS/RI	TBS	Mar-2000	Sep-2005	5,134	0	5,134					0	155	1,046	1,071	2,862	
32674 6257 Construction	TBS	Mar-2003	Sep-2005	25,670	0	25,670					0					25,670
Project Total				\$30,803	\$0	\$30,803	\$0	\$0	\$0	\$0	\$0	\$155	\$1,046	\$1,071	\$28,532	

**WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>FORT POINT CHANNEL STORAGE CONDUIT, CHARLESTOWN BOS019 STORAGE CONDUIT</b>																
32675 6258 Design/CS/RI	TBS	Jul-2002	Mar-2007	2,782	0	2,782										2,782
32676 6259 Construction 1	TBS	Mar-2005	Mar-2007	10,867	0	10,867										10,867
32677 6260 Construction 2	TBS	Mar-2005	Sep-2006	3,042	0	3,042										3,042
<b>Project Total</b>				<b>\$16,691</b>	<b>\$0</b>	<b>\$16,691</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16,691</b>
<b>CHELSEA TRUNK SEWER AND BRANCH SEWER RELIEF, CHELSEA CHE008 OUTFALL IMPROVEMENTS</b>																
32678 6261 Design/CS/RI	TBS	Jul-97	Dec-2002	4,810	0	4,810										
32679 6262 Construction #1	TBS	Sep-99	Aug-2000	3,037	0	3,037										
32680 6263 Construction #2	TBS	Dec-99	Jun-2001	17,720	0	17,720										
32689 6370 Construction #3	TBS	Jul-2002	Dec-2002	1,646		1,646										
32690 6371 Construction #4	TBS	Jul-2002	Dec-2002	1,645		1,645										
<b>Project Total</b>				<b>\$28,857</b>	<b>\$0</b>	<b>\$28,857</b>	<b>\$170</b>	<b>\$260</b>	<b>\$260</b>	<b>\$219</b>	<b>\$909</b>	<b>\$976</b>	<b>\$11,316</b>	<b>\$10,966</b>	<b>\$1,322</b>	<b>\$3,467</b>
<b>UNION PARK DETENTION TREATMENT FACILITY</b>																
32681 6264 Design/CS/RI	TBS	Dec-99	Mar-2005	5,436	0	5,436										
32682 6265 Construction	TBS	Mar-2003	Mar-2005	27,164	0	27,164										
<b>Project Total</b>				<b>\$32,620</b>	<b>\$0</b>	<b>\$32,620</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$516</b>	<b>1,135</b>	<b>1,032</b>	<b>2,753</b>
<b>UPGRADE EXISTING CSO FACILITIES AND MWRA FLOATABLES CONTROL</b>																
32647 6123 Design/CS/RI	CDM	Jun-96	Oct-99	2,749	1,234	1,515										
32685 6268 Construction #1	TBS	Nov-97	Oct-99	6,929	0	6,929										
32686 6269 Construction #2	TBS	Oct-97	Apr-99	2,354	0	2,354										
32687 6270 Construction #3	TBS	Feb-98	Oct-99	285	0	285										
<b>Project Total</b>				<b>\$12,317</b>	<b>\$1,234</b>	<b>\$11,083</b>	<b>\$280</b>	<b>\$1,222</b>	<b>\$2,690</b>	<b>\$3,772</b>	<b>\$7,964</b>	<b>\$2,454</b>	<b>\$665</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>COMMUNITY MANAGED PROJECTS:</b>																
<b>SOUTH DORCHESTER BAY SEWER SEPARATION (FOX POINT BOS008-49)</b>																
32651 6155 Design/CS/RI	Various	Jun-96	Sep-2007	6,160	2,190	3,970										
32684 6247 Construction	TBS	Nov-98	Sep-2007	32,177	97	32,080										
<b>Project Total</b>				<b>\$38,337</b>	<b>\$2,287</b>	<b>\$36,050</b>	<b>\$0</b>	<b>\$0</b>	<b>\$502</b>	<b>\$0</b>	<b>\$502</b>	<b>\$2,017</b>	<b>\$3,541</b>	<b>\$4,836</b>	<b>\$5,145</b>	<b>\$20,009</b>

**WASTEWATER IMPROVEMENT PROGRAM  
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(\$000)**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>SOUTH DORCHESTER BAY SEWER SEPARATION (COMMERCIAL POINT BOS090)</b>																
32650 6154 Design/CS/RI	Various	Jun-96	Nov-2008	9,084	2,421	6,663		0	187		187	373	612	890	896	3,704
32655 6248 Construction	TBS	Apr-99	Nov-2008	51,502	25	51,477			25		25	1,766	4,175	6,564	8,945	31,892
<b>Project Total</b>				<b>\$60,586</b>	<b>\$2,446</b>	<b>\$58,140</b>	<b>\$0</b>	<b>\$0</b>	<b>\$212</b>	<b>\$0</b>	<b>\$212</b>	<b>\$2,159</b>	<b>\$4,787</b>	<b>\$7,454</b>	<b>\$7,841</b>	<b>\$33,686</b>
<b>NEPONSET RIVER SEWER SEPARATION (BOS093-95)</b>																
32652 6158 Design/CS/RI	Various	Jan-95	Jun-2000	1,732	243	1,489		0	496		496	590	403			0
32653 6160 Construction	TBS	Apr-98	Jun-2000	7,530	80	7,450		0	2,000		2,000	3,406	1,644	0		0
<b>Project Total</b>				<b>\$9,262</b>	<b>\$323</b>	<b>\$8,939</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,996</b>	<b>\$0</b>	<b>\$2,996</b>	<b>\$3,996</b>	<b>\$2,047</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>CONSTITUTION BEACH SEWER SEPARATION (BOS002)</b>																
32649 6153 Design/CS/RI	Various	Jan-97	Oct-2000	1,425	49	1,376		0	682		682	328	366			0
32668 6249 Construction	TBS	Apr-99	Oct-2000	7,839	65	7,774			65		65	3,654	4,055			0
<b>Project Total</b>				<b>\$9,264</b>	<b>\$114</b>	<b>\$9,150</b>	<b>\$0</b>	<b>\$0</b>	<b>\$747</b>	<b>\$0</b>	<b>\$747</b>	<b>\$3,982</b>	<b>\$4,421</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>CAMBRIDGE CAM002-204 SEWER SEPARATION</b>																
32654 6161 Design/CS/RI	Various	Jan-97	Jan-2000	1,943	1,001	942		297			297	588	57			0
32672 6235 Construction	TBS	Jul-98	Jan-2000	10,634	0	10,634		3,199			3,199	6,866	569			0
<b>Project Total</b>				<b>\$12,577</b>	<b>\$1,001</b>	<b>\$11,576</b>	<b>\$0</b>	<b>\$3,496</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,496</b>	<b>\$7,454</b>	<b>\$626</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>BWSC FLOATABLES CONTROL</b>																
32637 6168 Design/CS/RI	TBS	Jan-98	May-2001	178	58	120		15			15	22	60	24		0
32683 6268 Construction	TBS	Dec-99	May-2001	923	0	923					0	51	615	256		0
<b>Project Total</b>				<b>\$1,101</b>	<b>\$58</b>	<b>\$1,043</b>	<b>\$0</b>	<b>\$15</b>	<b>\$0</b>	<b>\$0</b>	<b>\$15</b>	<b>\$73</b>	<b>\$675</b>	<b>\$280</b>	<b>\$0</b>	<b>\$0</b>
<b>CAMBRIDGE FLOATABLES CONTROL</b>																
32655 6162 Design/CS/RI	Various	Jan-97	May-2001	65	0	65		16			16	20	20	9		0
32684 6267 Construction	TBS	Dec-99	May-2001	351	0	351					0	19	234	98		0
<b>Project Total</b>				<b>\$416</b>	<b>\$0</b>	<b>\$416</b>	<b>\$0</b>	<b>\$16</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16</b>	<b>\$39</b>	<b>\$254</b>	<b>\$107</b>	<b>\$0</b>	<b>\$0</b>

**WASTEWATER IMPROVEMENT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$'000)**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Planning Thru FY97	Remaining Budget 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>CSO PLANNING AND SUPPORT</b>																
32440 5790 Consult Tech Asst	CH2M-Hill	Mar-86	Feb-88	\$228	\$228	\$0					\$0					\$0
32401 5791 Planning/EIR	CH2M-Hill	Mar-88	Sep-90	\$10,769	10,769	0					0					0
32403 5716 Master Planning	Metcalf & Eddy	Mar-92	Sep-97	\$16,127	17,264	863				0	\$863					0
32645 6036 Watershed Planning	CRWA	Dec-94	Oct-99	\$569	409	160	500	183	180		\$80	80				0
32409 5795 Modeling	MIT	May-92	Oct-94	\$300	300	0					0					0
32411 5787 SOP Program	Boston Water/Sew	Jan-94	Jun-2000	\$2,508	2,508	0	0	0	0	0	0					0
32407 5870 Technical Assistance	Various	Mar-88	Feb-2010	\$61	61	0					0					0
32691 6372 System Assessment	TBS	May-97	Jun-2000	500	26	474	39	39	40	40	158	158	158	16	16	128
32648 6150 Technical Review	TBS	Jun-96	Dec-2009	235	26	209	7	2	4	4	17	16	16	15	15	45
32688 6271 Financial Audit	TBS	Apr-98	Jul-2009	360	0	360	0	0	0	45	45	15	45	15	15	195
32658 6169 Land/Easement	TBS	Jul-96	Jun-05	12,750	207	12,544	20	15	115	515	665	1,502	3,404	2,612	125	4,236
<b>Project Total</b>				<b>\$46,407</b>	<b>\$31,798</b>	<b>\$14,610</b>	<b>\$566</b>	<b>\$319</b>	<b>\$339</b>	<b>\$804</b>	<b>\$1,828</b>	<b>\$1,771</b>	<b>\$3,623</b>	<b>\$2,643</b>	<b>\$186</b>	<b>\$4,559</b>
<b>Sub-total: CSOs</b>				<b>\$469,915</b>	<b>\$39,261</b>	<b>\$430,655</b>	<b>\$1,352</b>	<b>\$6,654</b>	<b>\$9,069</b>	<b>\$6,419</b>	<b>\$23,484</b>	<b>\$33,250</b>	<b>\$39,796</b>	<b>\$76,477</b>	<b>\$72,073</b>	<b>\$185,565</b>

WASTEWATER IMPROVEMENT PROGRAM CAPITAL EXPENDITURE FORECAST FY 1998 - 2007 (\$000)																
PROJECT	Project Participants	Begin	End	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
E: OTHER																
1501 III PROGRAM Community Financial Assistance																
10232 5330 GRANT (25%)	Communities	May-93	May-95	\$5,766	\$5,766	\$0					\$0					\$0
10233 5393 LOAN (75%)	Communities	May-93	May-95	\$17,150	17,150	0					0					0
10234 5394 REPAYMENT	Communities	May-94	May-2002	(\$17,150)	(8,652)	(8,498)	(750)	(750)	(750)	(750)	(3,000)	(2,000)	(1,500)	(1,000)	(998)	0
10273 6084 GRANT (25%)	Communities	Jul-95	Jun-2005	10,171	2,991	7,180	250	250	250	250	1,000	1,000	1,500	1,500	1,500	680
10274 6085 LOAN (75%)	Communities	Jul-95	Jun-2005	30,514	8,978	21,536	750	750	750	750	3,000	3,000	4,500	4,500	4,500	2,036
10282 6170 REPAYMENT	Communities	Jul-96	Jun-2010	(30,514)	(1,092)	(29,422)	(252)	(313)	(578)	(646)	(1,789)	(2,389)	(2,989)	(3,889)	(3,696)	(14,670)
Project Total:				\$15,937	\$25,141	(\$9,204)	(\$2)	(\$63)	(\$328)	(\$396)	(\$789)	(\$389)	\$1,511	\$1,111	\$1,306	(\$11,954)
1599 FINAL PAYMENTS & RELEASE OF RETAINAGE																
92217 5946 BHS-MIT				\$217	\$217	\$0					\$0					\$0
92213 5943 BHS-UMASS	UMass-Amherst			267	267	0					0					\$0
Project Total:				\$484	\$484	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sub-total: OTHER PROGRAMS				\$16,421	\$25,625	(\$9,204)	(\$2)	(\$63)	(\$328)	(\$396)	(\$789)	(\$389)	\$1,511	\$1,111	\$1,306	(\$11,954)
TOTAL WASTEWATER				\$1,099,915	\$384,825	\$715,083	\$22,007	\$19,526	\$17,282	\$15,143	\$73,958	\$52,899	\$98,126	\$127,988	\$134,418	\$223,135

## **WASTEWATER GRANT RECEIPTS AND LOAN FUND PROJECTIONS**

### **FISCAL YEARS 1998 - 2000**

#### **Grant Assumptions**

The Grant revenue cashflows are based upon the following assumptions regarding grant funding:

- Federal Title II Construction Grants Program

No new grants will be awarded. A limited amount of additional grant funding will be made available to cover increased costs of existing grant projects in order to close out the existing grants.

- Special Federal Grants

The federal government has appropriated \$654.5 million through June 30, 1997, in support of the Boston Harbor Project, including \$75 million appropriated in FY97. The cashflows have been prepared assuming that MWRA will receive no additional special federal grant appropriations.

- Massachusetts Grant Program

A limited amount of additional state grant funding will be made available to cover increased costs of existing grant projects in order to close out existing grants.

#### **State Revolving Loan Fund Assumptions**

The State Revolving Loan Fund (SRF) cashflow are based upon the following factors:

- Cashflow projections are included only for projects which are currently financed through the SRF and for projects for which we will borrow from the SRF during FY98.
- These cashflows do not include an estimated \$50 million SRF borrowing per year included in MWRA planning estimates for each year after FY98.

**WASTEWATER CONSTRUCTION  
GRANT RECEIPTS FORECAST FY 1998-2007  
(\$000)**

SOURCE: "REGULAR" GRANTS PROJECT	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
<b>A. INTERCEPTION AND PUMPING:</b>												
<b>BRAINTREE-WEYMOUTH RELIEF FAC.</b>												
5311 P Fac Plan Phase 1 (Fed)	\$240	\$240	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5311 P Fac Plan Phase 1 (State)	48	48	0	0	0	0	0	0	0	0	0	0
Project Total:	\$288	\$288	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>NEW NEPONSET VALLEY R.S.</b>												
5380 P Facilities Plan (State)	408	408	0	0	0	0	0	0	0	0	0	0
5381 P EIR/Supp. Fac Plan (State)	478	478	0	0	0	0	0	0	0	0	0	0
Project Total:	\$887	\$887	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>WELLESLEY EXTENSION R.S.</b>												
5346 C Study	324	324	0	0	0	0	0	0	0	0	0	0
5346 C Design/EIR/CS/RI (Fed)	2,346	1,655	691	0	0	0	0	691	0	0	0	0
5346 C Design/EIR/CS/RI (State)	3,687	3,675	12	0	0	0	12	0	0	0	0	0
5349 C Construction 1 (Fed)	4,698	4,068	630	0	630	0	0	630	0	0	0	0
5349 C Construction 1 (State)	7,383	7,164	219	0	0	0	219	0	0	0	0	0
5351 C Construction 2 (Fed)	1,686	1,602	84	0	84	0	0	84	0	0	0	0
5351 C Construction 2 (State)	2,650	2,634	16	0	0	0	16	0	0	0	0	0
5434 C Construction 3 (Fed)	2,397	2,163	234	0	234	0	0	234	0	0	0	0
5434 C Construction 3 (State)	3,767	3,512	255	0	0	0	255	0	0	0	0	0
5350 C Construction 4 (Fed)	1,687	1,656	31	0	31	0	0	31	0	0	0	0
5350 C Construction 4 (State)	2,852	2,520	132	0	0	0	132	0	0	0	0	0
5431 C Construction 5 (Fed)	1,881	1,811	70	0	70	0	0	70	0	0	0	0
5431 C Construction 5 (State)	2,956	2,835	121	0	0	0	121	0	0	0	0	0
5433 C Construction 6 (Fed)	4,260	4,260	0	4,260	0	0	0	4,260	0	0	0	0
5433 C Construction 7 (State)	6,695	0	6,695	0	0	0	6,695	6,695	0	0	0	0
Project Total:	\$49,070	\$35,619	\$13,461	\$0	\$6,002	\$0	\$7,448	\$13,461	\$0	\$0	\$0	\$0
<b>FRAMINGHAM EXTENSION R.S.</b>												
5318 C Fac Plan Update/EIR	742	742	0	0	0	0	0	0	0	0	0	0
5319 C Design/CS/RI	400	400	0	0	0	0	0	0	0	0	0	0
Project Total:	\$1,142	\$1,142	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**WASTEWATER CONSTRUCTION  
GRANT RECEIPTS FORECAST FY 1998-2007**  
(\$000)

SOURCE:	"REGULAR" GRANTS	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
	PROJECT													
	FINAL PAYMENTS & RELEASE RETAINAGE													
5380	C Design - East Boston (Fed)	1,085	1,085	0	0	0	0	0	0	0	0	0	0	0
5380	C Design - East Boston (State)	69	69	0	0	0	0	0	0	0	0	0	0	0
5381	C RI - East Boston (Fed)	2,378	2,378	0	0	0	0	0	0	0	0	0	0	0
5381	C RI - East Boston (State)	1,514	1,514	0	0	0	0	0	0	0	0	0	0	0
5399	C Study/Design - Metering (State)	1,121	1,090	0	0	0	0	0	0	0	0	0	0	0
5399	C Construction 3 - Metering (State)	169	0	169	0	0	0	0	169	31	0	0	0	0
5355	C Design/RI - Charlestown (Fed)	1,240	1,240	0	0	0	0	0	0	0	0	0	0	0
5355	C Design/RI - Charlestown (State)	928	1,004	(76)	0	0	0	(76)	0	0	0	0	0	0
5387	C Constr. - Charlestown (Fed)	9,351	8,579	772	773	0	0	0	773	0	0	0	0	(0)
5387	C Constr. - Charlestown (State)	6,038	3,854	2,184	0	0	0	2,184	2,184	0	0	0	0	(0)
	Project Total:	\$23,894	\$20,814	\$3,080	\$773	\$0	\$0	\$2,308	\$3,081	\$0	\$0	\$0	\$0	(\$1)
	SUBTOTAL: INT & PUMP	\$76,280	\$68,749	\$16,531	\$773	\$6,002	\$0	\$9,768	\$16,532	\$0	\$0	\$0	\$0	(\$1)
	COMPLETED PROJECTS													
5398	C Construction 1 - Metering (State)	2,530	2,460	70	0	0	0	0	70	0	0	0	0	0
5401	C Construction 2 - Metering (State)	584	584	0	0	0	0	0	0	0	0	0	0	(0)
5396	C S. System Study (State)	1,639	1,639	0	0	0	0	0	0	0	0	0	0	0
5397	C S. System Equipment (State)	627	627	0	0	0	0	0	0	0	0	0	0	0
5382	C East Boston - Con (Fed)	10,466	10,466	0	0	0	0	0	0	0	0	0	0	0
5382	C East Boston - Con (State)	7,035	7,035	(0)	0	0	0	0	0	0	0	0	0	(0)
5383	C East Boston - Winth. Term. (Fed)	4,060	4,060	0	0	0	0	0	0	0	0	0	0	0
5383	C East Boston - Winth. Term. (State)	2,779	2,779	0	0	0	0	0	0	0	0	0	0	0
5384	C East Boston - Chel S.H. (Fed)	4,096	4,096	0	0	0	0	0	0	0	0	0	0	0
5384	C East Boston - Chel S.H. (State)	2,684	2,684	0	0	0	0	0	0	0	0	0	0	0
	Sub-Total: COMPLETED PROJECTS	\$36,522	\$36,451	\$70	\$0	\$0	\$0	\$70	\$70	\$0	\$0	\$0	\$0	\$0
	B. TREATMENT:													
	D.I. PRIMARY & SECONDARY TREATMENT FACILITY													
5526	CDM Facilities Plan	9,657	9,288	369	0	0	0	369	369	0	0	0	0	0
	Project Total:	\$9,667	\$9,288	\$369	\$0	\$0	\$0	\$369	\$369	\$0	\$0	\$0	\$0	\$0

WASTEWATER CONSTRUCTION GRANT RECEIPTS FORECAST FY 1998-2007 (\$000)														
SOURCE:	"REGULAR" GRANTS	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
	PROJECT													
WATER TRANSPORTATION FACILITIES														
5523	CP-001 Marine Facilities @ DI (Fed)	9,266	9,266	0	0	0	0	0	0	0	0	0	0	0
5523	CP-001 Marine Facilities @ DI (State)	14,561	14,561	0	0	0	0	0	0	0	0	0	0	0
5517	D.I. Pier:Sheet Pile (Fed)	413	413	0	0	0	0	0	0	0	0	0	0	0
5517	D.I. Pier:Sheet Pile (State)	649	649	0	0	0	0	0	0	0	0	0	0	0
5518	D.I. Pier:Pipe Pile (Fed)	1,469	1,469	0	0	0	0	0	0	0	0	0	0	0
5518	D.I. Pier:Pipe Pile (State)	2,309	2,309	0	0	0	0	0	0	0	0	0	0	0
5497	Res. Insp. - D.I. (Fed)	361	361	0	0	0	0	0	0	0	0	0	0	0
5497	Res. Insp. - D.I. (State)	567	567	0	0	0	0	0	0	0	0	0	0	0
5521	Design - On-Island	639	639	0	0	0	0	0	0	0	0	0	0	0
	Project Total:	\$30,234	\$30,234	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FINAL PAYMENTS & RELEASE RETAINAGE														
5440	C Design/CS - Clinton (Fed)	1,159	1,159	0	0	0	0	0	0	0	0	0	0	0
5440	C Design/CS - Clinton (State)	1,699	1,699	0	0	0	0	0	0	0	0	0	0	0
5561	C NI Inrmed Design (Fed)	292	292	0	0	0	0	0	0	0	0	0	0	0
5561	C NI Inrmed Design (State)	20	20	0	0	0	0	0	0	0	0	0	0	0
	Project Total:	\$3,170	\$3,170	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sub-total: TREATMENT														
		\$43,061	\$42,692	\$369	\$0	\$0	\$0	\$369	\$369	\$0	\$0	\$0	\$0	\$0

**WASTEWATER CONSTRUCTION  
GRANT RECEIPTS FORECAST FY 1998-2007**  
(\$000)

SOURCE: "REGULAR" GRANTS	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
<b>COMPLETED PROJECTS:</b>													
5512 C DI Electrical Upgrade (Fed)	124	124	0	0	0	0	0	0	0	0	0	0	0
5512 C DI Electrical Upgrade (State)	85	85	0	0	0	0	0	0	0	0	0	0	0
5513 C DI Electrical Upgrade (Fed)	977	977	0	0	0	0	0	0	0	0	0	0	0
5513 C DI Electrical Upgrade (State)	622	582	40	0	0	0	0	0	0	0	0	0	0
5452 C DI P&P Constr (Fed)	16,646	15,956	690	0	0	0	0	0	40	0	0	0	0
5462 C DI P&P Constr (State)	6,961	5,203	1,758	0	0	0	0	0	690	0	0	0	0
5463 C DI P&P Constr Svs (Fed)	1,834	1,828	6	0	0	0	0	0	1,758	0	0	0	0
5463 C DI P&P Constr Svs (State)	797	459	338	0	0	0	0	0	6	0	0	0	0
5461 C DI P&P Design Allow (Fed)	1,062	1,062	0	0	0	0	0	0	338	0	0	0	0
5491 C DI Sludge Thick Con (Fed)	1,303	1,303	0	0	0	0	0	0	0	0	0	0	0
5491 C DI Sludge Thick Con (State)	261	261	0	0	0	0	0	0	0	0	0	0	0
5443 C Construction 1 - Clinton (Fed)	10,169	10,169	0	0	0	0	0	0	0	0	0	0	0
5443 C Construction 1 - Clinton (State)	18,898	18,898	0	0	0	0	0	0	0	0	0	0	0
5444 C Construction 2 - Clinton (Fed)	172	172	0	0	0	0	0	0	0	0	0	0	0
5444 C Construction 2 - Clinton (State)	261	261	0	0	0	0	0	0	0	0	0	0	0
5250 Clinton Design	1,333	1,333	0	0	0	0	0	0	0	0	0	0	0
5563 NI Inrmed Upgrade Con (Fed)	653	653	0	0	0	0	0	0	0	0	0	0	0
5563 NI Inrmed Upgrade Con (State)	131	131	0	0	0	0	0	0	0	0	0	0	0
5564 NI Inrmed Upgrade Con (Fed)	137	137	0	0	0	0	0	0	0	0	0	0	0
5564 NI Inrmed Upgrade Con (State)	27	27	0	0	0	0	0	0	0	0	0	0	0
5565 NI Inrmed Upgrade Con (Fed)	677	677	0	0	0	0	0	0	0	0	0	0	0
5565 NI Inrmed Upgrade Con (State)	135	135	0	0	0	0	0	0	0	0	0	0	0
5566 NI Inrmed Upgrade Con (Fed)	2,253	2,253	0	0	0	0	0	0	0	0	0	0	0
5566 NI Inrmed Upgrade Con (State)	451	451	0	0	0	0	0	0	0	0	0	0	0
<b>Sub-Total: COMPLETED PROJECTS</b>	<b>\$65,968</b>	<b>\$63,136</b>	<b>\$2,832</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,832</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**WASTEWATER CONSTRUCTION  
GRANT RECEIPTS FORECAST FY 1998-2007  
(\$000)**

SOURCE: "REGULAR" GRANTS PROJECT	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
<b>C. RESIDUALS</b>													
<b>COMPLETED PROJECTS:</b>													
6662 C Phase 1 Study	354	354	0	0	0	0	0	0	0	0	0	0	0
<b>D. CSO's</b>													
<b>CSO CONTROL PROGRAM</b>													
6791 C Planning/EIR (State)	1,122	1,122	0	0	0	0	0	0	0	0	0	0	0
<b>COMPLETED PROJECTS:</b>													
6766 C Comm Pl Design/CS (Fed)	129	129	0	0	0	0	0	0	0	0	0	0	0
6766 C Comm Pl Design/CS (State)	0	0	0	0	0	0	0	0	0	0	0	0	0
6769 C Comm Pl Construction (Fed)	2,709	2,709	0	0	0	0	0	0	0	0	0	0	0
6769 C Comm Pl Construction (State)	1,806	1,806	0	0	0	0	0	0	0	0	0	0	0
<b>Project Total:</b>	<b>\$4,644</b>	<b>\$4,644</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>WATER METER MODERNIZATION</b>													
6710 Construction 1 (State)	755	0	755	0	0	0	755	755	0	0	0	0	0
Sub-total: DISTRIBUTION AND PUMPING	755	\$0	\$755	\$0	\$0	\$0	\$755	\$755	\$0	\$0	\$0	\$0	\$0
<b>FEDERAL GRANTS GRAND TOTAL</b>	<b>\$103,699</b>	<b>\$96,228</b>	<b>\$7,470</b>	<b>\$773</b>	<b>\$6,002</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,774</b>	<b>\$696</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$0)</b>
<b>STATE GRANTS GRAND TOTAL</b>	<b>\$124,007</b>	<b>\$110,919</b>	<b>\$13,088</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,962</b>	<b>\$10,962</b>	<b>\$2,136</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>REGULAR GRANTS GRAND TOTAL</b>	<b>\$227,706</b>	<b>\$207,148</b>	<b>\$20,558</b>	<b>\$773</b>	<b>\$6,002</b>	<b>\$0</b>	<b>\$10,962</b>	<b>\$17,726</b>	<b>\$2,832</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$1)</b>

WASTEWATER SPECIAL FEDERAL \$200M BHP GRANT GRANT RECEIPTS FORECAST FY 1998 - 2007 (\$000S)														
PROGRAM:	\$200 MILLION GRANT	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
B. TREATMENT														
	12 D.I. PRIMARY & SECONDARY TREATMENT FACILITY													
	5700 CP-105 Primary Clarifier Battery A&B	\$30,499	\$27,811	\$2,688	\$2,232	\$0	\$0	\$456	\$2,688	\$0	\$0	\$0	\$0	(\$0)
	5742 CP-130 Primary Clarifier Battery C&D	43,988	43,331	657	0	0	0	657	657	0	0	0	0	0
	5850 CP-152 Nut Island Headworks	34,954	30,372	4,581	1,019	1,814	0	0	2,833	0	1,748	0	0	0
	SECONDARY CONSTRUCTION													
	5484 CP-202 Secondary Reactor Blttry A&B	53,469	53,469	(0)	0	0	0	0	0	0	0	0	0	(0)
	5744 CP-204 Disinfect Fcily/Phase I Seawall	20,424	18,637	1,788	0	0	0	1,788	1,788	0	0	0	0	(0)
	PRETREATMENT & PRIMARY DESIGN													
	5532 DP-4 Nut Island Headworks	1,356	1,356	0	0	0	0	0	0	0	0	0	0	0
	5529 DP-9 Primary Phase I	2,819	2,819	0	0	0	0	0	0	0	0	0	0	0
	SECONDARY DESIGN													
	5701 DP-28 Sec. Treat. Fac. Ph. 1&2	3,130	3,130	0	0	0	0	0	0	0	0	0	0	0
	Unallocated Revenues	9,361	0	9,361	0	846	282	5,096	6,224	296	2,765	75	0	0
	\$200M GRANT TOTAL:	\$200,000	\$180,925	\$19,075	\$3,251	\$2,661	\$282	\$7,997	\$14,190	\$296	\$4,513	\$75	\$0	(\$0)

**WASTEWATER SPECIAL FEDERAL "513" GRANTS  
RECEIPTS FORECAST FY 1998-2007  
(000's)**

PROGRAM: "513" GRANTS PROJECT	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
D.I. PRIMARY & SECONDARY TREATMENT FACILITY													
FACILITIES PLANNING													
5526 Facilities Plan (C259-713-15)	\$2,211	\$2,211	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SITE FACILITIES CONSTRUCTION													
5536 CP-020 Asbestos Rmvl Ft Dawes-SPS	\$362	\$362	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5599 CP-021 Demo Ft. Dawes Bunkers	3,443	3,443	0	0	0	0	0	0	0	0	0	0	0
5600 CP-023 Pump Sta Mode & Sewers	3,955	3,955	0	0	0	0	0	0	0	0	0	0	0
PROJECT TOTAL	\$7,760	\$7,760	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PRETREATMENT & PRIMARY CONSTRUCTION													
5541 CP-151 Inter-Island Tunnel	\$45,375	\$45,306	\$69	\$0	\$0	\$66	\$0	\$66	\$3	\$0	\$0	\$0	\$0
CONSTRUCTION MANAGEMENT													
5535 P/C/M Services	\$167	\$167	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
LEAD DESIGN SERVICES													
5486 Geotech Svcs Marine Borings	\$7,280	\$7,280	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SITE FACILITIES DESIGN													
5528 DP-1 Early Site Prep	\$792	\$792	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SECONDARY DESIGN													
5531 DP-6 Effluent Outfall Tunnel	\$3,300	\$3,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PROJECT TOTAL	\$66,885	\$66,816	\$69	\$0	\$0	\$66	\$0	\$66	\$3	\$0	\$0	\$0	\$0

**WASTEWATER SPECIAL FEDERAL "513" GRANTS**

**RECEIPTS FORECAST FY 1988-2007**

(000's)

PROGRAM: "513" GRANTS PROJECT	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
<b>WATER TRANSPORTATION FAC.</b>													
<b>REVERE SUGAR</b>													
5895 Asbestos - Revere Sugar	\$362	\$362	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>NUT ISLAND</b>													
5533 Res. Insp. - N.I.	\$380	\$380	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5515 CP-150 Marine Facilities @ NI	3,964	3,964	0	0	0	0	0	0	0	0	0	0	0
	\$4,344	\$4,344	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>DESIGN</b>													
5521 Design - On Island Marine	\$348	\$348	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>PROJECT TOTAL</b>	<b>\$5,055</b>	<b>\$5,054</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>BHP Total</b>	<b>\$71,940</b>	<b>\$71,870</b>	<b>\$70</b>	<b>\$0</b>	<b>\$0</b>	<b>\$66</b>	<b>\$0</b>	<b>\$66</b>	<b>\$3</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Sub-total: TREATMENT</b>	<b>\$71,940</b>	<b>\$71,870</b>	<b>\$70</b>	<b>\$0</b>	<b>\$0</b>	<b>\$66</b>	<b>\$0</b>	<b>\$66</b>	<b>\$3</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>D. CSO's</b>													
<b>CSO CONTROL PROGRAM</b>													
5791 P Planning/EIR	\$457	\$457	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5716 P Master Planning	913	913	0	0	0	0	0	0	0	0	0	0	0
<b>Project Total:</b>	<b>\$1,370</b>	<b>\$1,371</b>	<b>(\$0)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$0)</b>
<b>Sub-total: CSO's</b>	<b>\$1,370</b>	<b>\$1,371</b>	<b>(\$0)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$0)</b>
<b>COMPLETED PROJECTS</b>													
5755 P Comm PI Design/CS	\$389	\$382	\$7	\$0	\$0	\$7	\$0	\$7	\$0	\$0	\$0	\$0	\$0
5759 P Comm PI Design/Construction	718	718	0	0	0	0	0	0	0	0	0	0	0
<b>Project Total:</b>	<b>\$1,107</b>	<b>\$1,100</b>	<b>\$7</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7</b>	<b>\$0</b>	<b>\$7</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>"513" GRANTS GRAND TOTAL:</b>	<b>\$74,417</b>	<b>\$74,341</b>	<b>\$77</b>	<b>\$0</b>	<b>\$0</b>	<b>\$73</b>	<b>\$0</b>	<b>\$73</b>	<b>\$3</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**WASTEWATER SPECIAL FEDERAL \$250M BHP GRANT  
RECEIPTS FORECAST FY 1998 - 2007  
(\$000)**

SOURCE:	\$250 MILLION GRANT	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY96	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
<b>B. TREATMENT</b>														
<b>SECONDARY CONSTRUCTION</b>														
5492 CP-203 Clarifier Batteries A&B		\$144,282	\$132,723	\$11,559	\$4,113	\$232	\$0	\$0	\$4,345	\$0	\$7,214	\$0	\$0	(\$0)
5493 CP-303 Residual Trt Fac. Phl Sec A&B		97,096	87,345	9,751	2,396	1,918	1,203	840	6,358	0	3,394	0	0	(0)
<b>SECONDARY DESIGN</b>														
5701 Design Allowance (CP-203)		5,090	5,090	0	0	0	0	0	0	0	0	0	0	0
5758 Design Allowance (CP-303)		3,532	3,532	0	0	0	0	0	0	0	0	0	0	0
<b>\$250M GRANT TOTAL:</b>		<b>\$250,000</b>	<b>\$228,690</b>	<b>\$21,310</b>	<b>\$6,509</b>	<b>\$2,150</b>	<b>\$1,203</b>	<b>\$940</b>	<b>\$10,703</b>	<b>\$0</b>	<b>10,608</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$0)</b>

**WASTEWATER SPECIAL FEDERAL \$75M BHP GRANT  
GRANT RECEIPTS FORECAST FY 1998 - 2007  
(\$000)**

PROGRAM:	\$75 MILLION GRANTS	Total Grant Amount	Projected Grant Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
<b>B. TREATMENT</b>														
<b>D.I. PRIMARY &amp; SECONDARY TREATMENT FACILITY</b>														
<b>SITE FACILITIES CONSTRUCTION</b>														
5474 CP-043	Site Prep/Demo Exist Plant	\$22,953	\$22,273	\$680	\$0	\$0	\$0	\$0	\$0	\$680	\$0	\$0	\$0	(\$0)
<b>SECONDARY CONSTRUCTION</b>														
5484 CP-202	Secondary Rec.Batt A&B	9,515	2,757	6,758	593	479	185	0	1,257	5,501	0	0	0	0
5484 CP-202	Unallocated Contingency	1,113	0	1,113	0	0	0	0	0	1,113	0	0	0	0
6159 CP-260	2ndary C Reactr & Clarifr Bat	28,525	3,541	24,984	6,652	7,815	9,090	0	23,558	0	0	1,426	0	0
<b>SECONDARY DESIGN</b>														
5701 DP-028	CP-043 Design Allowance	1,496	1,496	0	0	0	0	0	0	0	0	0	0	0
<b>ON-ISLAND RESIDUALS CONSTRUCTION</b>														
5493 CP-303	Residual Trl.Fac.Phi Sec A&B	761	0	761	0	0	0	0	0	761	0	0	0	0
Contingency	Unallocated Contingency (\$250M: Contracts 5482 & 5493)	4,162	0	4,162	0	0	0	0	0	4,162	0	0	0	0
<b>C. RESIDUALS</b>														
<b>RESIDUALS MANAGEMENT FACILITIES</b>														
6012	Inside Construction	6,121	375	5,746	2,098	3,342	0	0	5,440	0	0	306	0	0
5667	Con.Ser./Res. Inspection	355	122	232	133	81	0	0	214	0	0	18	0	0
<b>\$75M GRANT TOTAL:</b>		<b>\$75,000</b>	<b>\$30,563</b>	<b>\$44,437</b>	<b>\$9,475</b>	<b>\$11,717</b>	<b>\$9,275</b>	<b>\$0</b>	<b>\$30,468</b>	<b>\$12,217</b>	<b>\$0</b>	<b>\$1,750</b>	<b>\$0</b>	<b>\$0</b>

WASTEWATER SPECIAL FEDERAL \$50M BHP GRANT RECEIPTS FORECAST FY 1998 - 2007 (\$000)													
SOURCE:	\$50 MILLION GRANT	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
	D.I. PRIMARY & SECONDARY TREATMENT FACI	ITY											
	SITE FACILITIES CONSTRUCTION												
	5474 CP-043 Late Site Prep/Demo Exist Plnt	\$15,600	\$15,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	PRETREATMENT & PRIMARY CON.												
	5541 CP-151 Inter-Island Tunnel	34,400	30,415	3,985	0	0	0	0	0	0	0	0	0
	\$50M GRANT TOTAL:	\$50,000	\$46,015	\$3,985	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

STATE WATER TRANSPORTATION GRANTS RECEIPTS FORECAST FY 1998 - 2007 (\$000)														
SOURCE:	STATE WATER GRANTS	Total Grant Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
	WATER MAIN RELOCATION/CHELSEA RVR													
68023	6135 Planning/Design/CA/RI	\$1,097	\$0	\$1,097	\$0	\$0	\$0	\$0	\$0	\$0	\$1,097	\$0	\$0	\$0
STATE WATER TRANS. GRANT TOTAL:		\$1,097	\$0	\$1,097	\$0	\$0	\$0	\$0	\$0	\$0	\$1,097	\$0	\$0	\$0

**WASTEWATER STATE REVOLVING LOAN FUND  
RECEIPTS FORECAST FY 1998 - 2007  
(\$'000)**

SOURCE:	STATE REVOLVING LOAN FUND PROJECT	Total Loan Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
A.	INTERCEPTION AND PUMPING												
	1 QUINCY CUMP FACILITIES												
5404	P Design	\$1,979	\$1,110	\$868	\$25	\$0	\$417	\$119	\$561	\$209	\$0	\$0	\$99
	Project Total:	\$1,979	\$1,110	\$868	\$25	\$0	\$417	\$119	\$561	\$209	\$0	\$0	\$99
3	NEW NEPONSET VALLEY R.S.												
5385	C Construction 1	\$5,189	\$5,189	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$0)
5390	C Construction 2	2,547	2,547	0	0	0	0	0	0	0	0	0	0
5834	C Construction 3	3,264	3,264	(0)	0	0	0	0	0	0	0	0	(0)
5835	C Construction 4	2,777	2,777	(0)	0	0	0	0	0	0	0	0	(0)
5389	C Construction 5	9,433	9,433	95	0	0	95	0	95	0	0	0	0
	Project Total:	23,304	\$23,209	\$95	\$0	\$0	\$95	\$0	\$95	\$0	\$0	\$0	\$0
6	FRAMINGHAM EXTENSION R.S.												
5319	Construction Serv./Res. Inspect.	\$881	\$0	\$881	\$436	\$0	\$349	\$95	\$881	\$0	\$0	\$0	\$0
5320	C Construction 1	6,994	0	6,994	4,814	0	2,180	0	6,994	0	0	0	0
5322	C Construction 2	5,063	0	5,063	3,272	0	1,771	20	5,063	0	0	0	0
5323	C Construction 3	6,782	0	6,782	2,378	0	4,204	181	6,782	0	0	0	(0)
	Project Total:	\$19,700	\$0	\$19,700	\$10,900	\$0	\$8,504	\$295	\$19,699	\$0	\$0	\$0	\$1
9	NORTH METRO TRUNK SEWER												
5339	C Construction	\$13,500	\$0	\$13,500	\$2,700	\$0	\$9,123	\$930	\$12,753	\$72	\$675	\$0	\$0
	Project Total:	\$13,500	\$0	\$13,500	\$2,700	\$0	\$9,123	\$930	\$12,753	\$72	\$675	\$0	\$0
	SUBTOTAL: INT & PUMP	\$68,483	\$24,319	\$34,164	\$13,825	\$0	\$18,139	\$1,344	\$33,108	\$281	\$875	\$0	\$100

**WASTEWATER STATE REVOLVING LOAN FUND  
RECEIPTS FORECAST FY 1998 - 2007  
(\$000)**

SOURCE:	STATE REVOLVING LOAN FUND PROJECT	Total Loan Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
B. TREATMENT													
	12 D.I. PRIMARY & SECONDARY TREATMENT FACILITY												
	SITE FACILITIES CONSTRUCTION												
	5601 CP-022 Earthworks/Landfill/Roadways	\$16,825	\$16,825	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	5640 CP-030 Disposal of Excess Till	14,077	14,077	0	0	0	0	0	0	0	0	0	0
	Project Total:	\$30,903	\$30,902	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	PRETREATMENT & PRIMARY CONSTRUCTION												
	5454 CP-160 Ancil.D.I.(Mods. Ph)	\$10,588	\$9,203	\$1,385	\$0	\$0	\$716	\$93	\$809	\$0	\$0	\$0	\$0
	Project Total:	\$10,588	\$9,203	\$1,385	\$0	\$0	\$716	\$93	\$809	\$0	\$0	\$0	\$0
	SECONDARY CONSTRUCTION												
	6180 CP-211 Ancillary Modifications Ph.III	\$6,432	\$0	\$6,432	\$0	\$0	\$4,565	\$1,868	\$6,432	\$0	\$0	\$0	(\$0)
	5637 CP-282 Effluent Outfall Tunnel-TBM	\$9,000	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	5637 CP-282 Effluent Outfall Tunnel-Shaft	15,355	15,355	0	0	0	0	0	0	0	0	0	0
	5637 CP-282 Effluent Outfall Tunnel	75,000	75,000	0	0	0	0	0	0	0	0	0	0
	5637 CP-282 Effluent Outfall Tunnel	49,608	49,608	0	0	0	0	0	0	0	0	0	0
	5637 CP-282 Effluent Outfall Tunnel	44,647	44,647	(0)	0	0	0	0	0	0	0	0	(0)
	5637 CP-282 Effluent Outfall Tunnel	40,000	40,000	40,000	32,811	0	7,189	0	40,000	0	0	0	0
	5637 CP-282 Effluent Outfall Tunnel	21,700	0	21,700	0	0	279	1,895	2,174	6,761	12,766	0	(0)
	Project Total:	\$255,310	\$193,610	\$61,700	\$32,811	\$0	\$7,468	\$1,895	\$42,174	\$6,761	\$12,766	\$0	\$0
	PERMANENT UTILITIES CONSTRUCTION												
	5615 CP-401 Off Island Water Line	\$9,350	\$9,350	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$0)
	5710 CP-427 Mn 13.8 Swgr. Bld&Dist/Yd Util.	20,388	20,388	0	0	0	0	0	0	0	0	0	0
	Project Total:	\$29,738	\$29,738	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$0)

**WASTEWATER STATE REVOLVING LOAN FUND  
RECEIPTS FORECAST FY 1998 - 2007  
(\$000)**

SOURCE:	STATE REVOLVING LOAN FUND	Total Loan Amount	Projected Payments Thru FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
CONSTRUCTION SUPPORT SERVICES													
5696	CP-902 Construction Rds & Utilities	\$5,113	\$5,113	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5695	CP-903 Fuel Facility	1,658	1,658	0	0	0	0	0	0	0	0	0	0
Project Total:		\$6,771	\$6,770	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

CONSTRUCTION MANAGEMENT													
5535	PCM Services (D.I.E.S.P)	\$220	\$220	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5622	PCM Services (D.I.E.S.P)	458	458	0	0	0	0	0	0	0	0	0	0
Project Total:		\$678	\$678	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

WATER TRANSPORTATION FAC.													
FORE RIVER STAGING AREA (FRSA)													
5524	CP-002 On-Shore Marine Facility Quincy	\$6,966	\$6,966	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5894	CP-010 Asbestos & Elec Cbl Rmvl, FRSA	423	423	0	0	0	0	0	0	0	0	0	0
5508	CP-011 Demolition @FRSA	237	237	0	0	0	0	0	0	0	0	0	0
5514	CP-012 Marine & On-Shore Fac FRSA	5,614	5,614	0	0	0	0	0	0	0	0	0	0
Project Total:		\$13,240	\$13,240	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

SQUANTUM POINT													
5631	CP-005 Dredging at Squantum Point	\$332	\$332	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5598	CP-013 Per Ferry @Squantum Pt Pk	1,642	1,642	(0)	0	0	0	0	0	0	0	0	(0)
5634	CP-014 Upland Facility @Squantum Pt	1,835	1,835	0	0	0	0	0	0	0	0	0	0
Project Total:		\$3,809	\$3,809	(\$0)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$0)

Project Sub-total:		\$17,049	\$17,049	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUBTOTAL: TREATMENT		\$357,468	\$287,950	\$69,517	\$32,811	\$0	\$12,748	\$3,856	\$49,415	\$7,337	\$12,766	\$0	(\$0)

**WASTEWATER STATE REVOLVING LOAN FUND**

**RECEIPTS FORECAST FY 1998 - 2007**

(\$'000)

SOURCE:	STATE REVOLVING LOAN FUND	Total Loan Amount	Projected Payments Thr. FY97	Remaining Balance 06/30/97	Jul-Sep 1997	Oct-Dec 1997	Jan-Mar 1998	Apr-Jun 1998	TOTAL FY98	TOTAL FY99	TOTAL FY2000	TOTAL FY2001	TOTAL FY2002	BEYOND FY2002
D. CSO's														
6220	N. Dor Bay Res. Ch Conduits & P.S. (Eng.)	\$3,540	\$0	\$3,540	\$0	\$0	\$2,023	\$1,517	\$3,540	\$0	\$0	\$0	\$0	\$0
6155	Sewer Separation/Fox Pl. BOS 088-089 (Eng.)	2,429	0	2,429	740	0	1,532	158	2,429	0	0	0	0	0
6247	Sewer Separation/Fox Pl. BOS 088-089	342	0	342	31	0	146	165	342	0	0	0	0	0
6154	Sewer Separation/Com.Pl. BOS 090 (Eng.)	2,608	0	2,608	1,598	0	887	123	2,608	0	0	0	0	0
6248	Sewer Separation/Com.Pl. BOS 090	48	0	48	8	0	24	16	48	0	0	0	0	0
6156	Sewer Separation/BOS 093-095 (Eng.)	739	0	739	160	0	251	327	739	0	0	0	0	0
6160	Sewer Separation/BOS 093-095 (Con.)	2,356	0	2,356	50	0	801	1,505	2,356	0	0	0	0	0
6153	Sewer Separation/BOS 002 (Engineer)	731	0	731	32	0	249	450	731	0	0	0	0	0
6249	Sewer Separation/BOS 002 (Construct.)	124	0	124	41	0	42	41	124	0	0	0	0	0
TBD	Cambridge Hydro Rel/CAM005 BOS017 (eng.)	74	0	74	0	0	32	42	74	0	0	0	0	0
6253	Interception Connection/BOS032 (Eng.)	91	0	91	0	0	91	0	91	0	0	0	0	0
6255	Sewer Separation/CAM 002-004 (Con.)	3,039	0	3,039	0	0	3,039	0	3,039	0	0	0	0	0
6261	Chelsea Tr Branch Sew Rel/CHE008 (Eng.)	764	0	764	0	0	518	246	764	0	0	0	0	0
6168	BWSC Floatables Controls (Eng.)	73	0	73	20	0	53	0	73	0	0	0	0	0
6162	Cambridge Floatables Controls (Eng.)	16	0	16	0	0	16	0	16	0	0	0	0	0
6123	Upgrade CSO's/WRA Float Control (Eng.)	2,375	0	2,375	420	0	1,670	286	2,375	0	0	0	0	0
6268	Upgrade CSO's/WRA Float Control (Con #1)	2,394	0	2,394	0	0	485	1,910	2,394	0	0	0	0	0
6269	Upgrade CSO's/WRA Float Control (Con #2)	1,706	0	1,706	0	0	998	708	1,706	0	0	0	0	0
6270	Upgrade CSO's/WRA Float Control (Con #3)	16	0	16	0	0	0	16	16	0	0	0	0	0
Subtotal	CSO Control Design/CSRI	13,441	0	13,441	2,969	0	7,322	3,160	13,441	0	0	0	0	0
Subtotal	CSO Control Construction	10,025	0	10,025	130	0	5,535	4,360	10,025	0	0	0	0	0
SUBTOTAL: CSO's		\$23,465	\$0	\$23,465	\$3,100	\$0	\$12,856	\$7,509	\$23,465	\$0	\$0	\$0	\$0	\$0
SRF GRAND TOTAL:		\$439,417	\$312,270	\$127,147	\$49,535	\$0	\$43,744	\$12,710	\$105,988	\$7,618	\$13,441	\$0	\$0	\$100

**WATERWORKS SYSTEM IMPROVEMENT'S PROGRAM**  
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(\$000)

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>F. DRINKING WATER QUALITY IMPROVEMENTS:</b>  <b>WALNUT HILL WATER TREATMENT PLANT</b>	53293 5023 Study 1	CH2M Hill	Jan-88	Feb-89	\$444	\$444	\$0				\$0					\$0
	53294 5024 Study 2	CH2M Hill	Jul-90	Jun-99	2,448	2,369	79					79				0
	53375 6182 AWWARF Study	Black & Veatch	Dec-96	Jun-99	200	27	173	17	17	17	68	37				0
	53376 6206 Open Res. Qual. Study	TBS	Feb-97	Jan-2000	898	0	898		74	111	185	454	259			0
	53367 6118 Crypto Inactivation Study	SNVA	Feb-97	Oct-98	150	28	122	20	20	20	80	42				0
	53364 6126 Dist. Water Quality Study	Deleted	Deleted	0	0	0	0									0
	53390 6385 Const Interim Disinfection	TBS	Feb-98	Dec-98	1,412	0	1,412		208	350	558	854				0
	53391 6397 Const Immediate Disinf.	TBS	Jul-97	Jun-98	100	0	100		50	50	100					0
	53393 6406 Immed. Disinf. MECO	TBS	Jul-97	Jun-98	50	0	50		25	25	50					0
	53304 5157 Permit Fees	DEP	Jul-93	Jun-98	46	12	34	16	6	6	34					0
	53300 5997 Technical Assistance	Various	Jan-88	May-2005	18	18	0									0
	53296 5042 EIR/Concept. Des	CDM	Nov-93	Jun-97	5,834	5,834	0									0
	53301 5017 Design/ESDC	CDM	Oct-96	May-2004	24,805	3,922	20,883	3,102	2,050	2,092	9,336	2,613	1,119	1,669	2,444	3,702
	53377 6207 Construction	TBS	Nov-99	May-2004	343,102	0	343,102				0		40,894	79,076	102,358	120,714
	53371 6134 Des Mgmt Supp	Metcalf & Eddy	Apr-97	Jan-99	1,702	232	1,470	232	232	232	928	542				0
	53378 6208 CM/RI	TBS	May-98	Apr-2005	30,608	0	30,608				335	1,002	4,493	6,492	8,435	9,851
	53379 6209 Water Qual. Dec. Support	Deleted	Deleted	0	0	0	0									0
	53368 6120 Equipment Prepurchase	Deleted	Deleted	0	0	0	0									0
<b>Project Total:</b>				<b>\$411,817</b>	<b>\$12,886</b>	<b>\$398,931</b>	<b>\$3,387</b>	<b>\$2,325</b>	<b>\$2,724</b>	<b>\$3,238</b>	<b>\$11,674</b>	<b>\$5,654</b>	<b>\$46,802</b>	<b>\$87,237</b>	<b>\$113,237</b>	<b>\$154,327</b>

<b>QUABBIN WATER TREATMENT PLANT</b>																
53363 6043 Design/CAIRI	CH2M Hill	May-95	Jul-2000	2,504	607	1,897	130	130	130	130	520	644	671	62		0
53382 6212 Construction	TBS	Aug-98	Jul-2000	3,146	0	3,146					0	1,441	1,564	141		0
53381 6211 Land	TBS	Jun-97	Jul-98	53	0	53	53				53					0
53380 6210 Permit Fee	DEP	Jul-96	Aug-98	5	5	0					0					0
<b>Project Total:</b>				<b>\$5,708</b>	<b>\$612</b>	<b>\$5,096</b>	<b>\$183</b>	<b>\$130</b>	<b>\$130</b>	<b>\$130</b>	<b>\$573</b>	<b>\$2,085</b>	<b>\$2,235</b>	<b>\$203</b>	<b>\$0</b>	<b>\$0</b>

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$000)**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>WATERSHED PROTECTION</b>																
53357 6144 Holden/W. Boylston Swr	MDC Watershed Mgmt	Apr-97	Jun-2000	8,500	\$2,000	\$6,500				\$3,000	\$2,500	\$1,000				\$0
53356 6002 Sudbury Resrvr Prot Sdy	Comprehensive Envr	Apr-95	Apr-97	102	102	0				0	0					0
<b>Project Total:</b>				<b>\$8,602</b>	<b>\$2,102</b>	<b>\$6,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,000</b>	<b>\$2,500</b>	<b>\$1,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>NORUMBEGA COVERED STORAGE</b>																
53297 5041 Preliminary Design	CDM	Sep-92	Mar-97	2,038	1,868	170	170									0
53364 6057 Design/CA/RI	TBS	Dec-97	Aug-2004	7,849	0	7,849										2,600
53383 6213 Construction	TBS	Jul-2000	Aug-2004	100,987	0	100,987										50,484
53372 6145 Land	Various	Sep-98	Jan-2000	234	0	234										0
53365 6115 Appraisal	Various	Nov-95	Jul-98	25	14	11										0
<b>Project Total:</b>				<b>\$111,133</b>	<b>\$1,882</b>	<b>\$109,251</b>	<b>\$170</b>	<b>\$80</b>	<b>\$240</b>	<b>\$246</b>	<b>\$736</b>	<b>\$1,125</b>	<b>\$1,354</b>	<b>\$25,693</b>	<b>\$27,249</b>	<b>\$53,084</b>
<b>NASH HILL COVERED STORAGE</b>																
53302 5049 Preliminary Design	Weston & Sampson	Jan-93	Dec-94	\$369	\$368	\$0										\$0
53362 6007 Design/CA/RI	Montgomery Watson	Aug-95	Oct-99	1,324	518	806	86	86	86	86	344	345	117			0
53370 6133 Construction	TBS	Aug-97	Oct-99	\$13,237	0	13,237	980	1,471	1,471	1,471	5,393	5,883	1,961			0
<b>Project Total:</b>				<b>\$14,929</b>	<b>\$886</b>	<b>\$14,043</b>	<b>\$1,066</b>	<b>\$1,557</b>	<b>\$1,557</b>	<b>\$1,557</b>	<b>\$5,737</b>	<b>\$6,228</b>	<b>\$2,078</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>BLUE HILLS COVERED STORAGE</b>																
68025 6130 EIR/Prelim. Design	Rizzo	Apr-97	Jun-99	\$768	\$81	\$687	\$89	\$89	\$89	\$89	\$331					\$0
53384 6214 Final Design/CA/RI	TBS	May-2000	Mar-2005	2,992	0	2,992					0	0	83	460	480	1,929
53386 6216 Construction	TBS	Mar-2003	Mar-2005	23,936	0	23,936					0	0				23,936
53385 6215 DEP/Permit Fees	Various	Mar-2002	Feb-2003	4	0	4					0	0				2
<b>Project Total:</b>				<b>\$27,700</b>	<b>\$81</b>	<b>\$27,619</b>	<b>\$89</b>	<b>\$89</b>	<b>\$89</b>	<b>\$89</b>	<b>\$331</b>	<b>\$83</b>	<b>\$490</b>	<b>\$490</b>	<b>\$492</b>	<b>\$25,867</b>

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM**  
**CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(\$000)

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>BEAR HILL COVERED STORAGE</b>																
53388 6218 Feasibility/EIR/DP	TBS	Jan-2004	Dec-2005	\$542	\$0	\$542					\$0	\$0				\$542
53389 6219 FD/CARI	TBS	Jan-2006	Dec-2011	542	0	542					0	0				542
53387 6217 Construction	TBS	Jan-2009	Dec-2011	4,335	0	4,335					0	0				4,335
Project Total:				\$5,419	\$0	\$5,419	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,419
<b>FELLS COVERED STORAGE</b>																
67711 5070 Des/CSRI -Fells Res	Klein & Hoffman	May-92	May-99	2,858	1,543	1,315										0
67713 5088 Const.-Fells Reserv	TBS	Feb-97	May-99	13,158	2,349	10,809	172	172	170	172	686	629				0
67715 5130 DEP Permit Fees	DEP	Jan-93	Dec-94	4	4	0	1,510	1,510	1,110	1,510	5,640	5,169				0
Project Total:				\$16,020	\$3,896	\$12,124	\$1,682	\$1,682	\$1,280	\$1,682	\$6,326	\$5,798	\$0	\$0	\$0	\$0
<b>FINAL PAYMENTS &amp; RELEASE OF RETAINAGE</b>																
Interim Corrosion Control:																
53303 5068 Design/CARI Wachusett	CH2M Hill	Jul-93	Jun-97	\$1,782	\$1,782	\$0					\$0					\$0
53360 6003 ICC Const- Wachusett	D & C Construction	Dec-94	Jun-96	6,483	6,483	0					0					0
53386 6116 ICC Const - Northboro	Various	Sep-96	Jun-97	120	120	0					0	0				0
53235 5004 DEP Source Approval	Town of Norwood			63	63	0					0	0				0
Project Total:				\$8,448	\$8,448	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>FINAL PAYMENTS: DRINKING WATER QUALITY IMPROVEMENTS</b>																
SUB TOTAL: DRINK. WAT. QUALITY				\$609,776	\$30,793	\$578,983	\$6,577	\$5,863	\$6,020	\$8,842	\$28,402	\$23,721	\$53,552	\$113,673	\$140,978	\$216,707

WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
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**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(\$000)

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>SLUICE GATE REHABILITATION</b>	59757 5255 Design/C&I	SEA	Aug-88	Jul-93	\$178	\$0					0	0				
	59758 5256 Construction 1	Walsh Const	Apr-91	Jul-93	1,529	0					0	0				\$0
	60034 6272 Design/C&I 2	TBS	Jun-98	Sep-2002	522	0	522			10	10	123	123	133	133	0
	59760 5258 Construction 2	TBS	Jul-2001	Sep-2002	3,526	0	3,526							1,763	1,763	0
	59761 5259 Constr.-Stop Planks	Precise Fab	Dec-88	Jun-89	444	0	444				0	0				0
	60027 6158 Con Sudbury Toe Drain Rep	MDC	Sep-96	Jun-97	1,400	0	1,400				0	0				0
	<b>Project Total:</b>				<b>\$7,599</b>	<b>\$3,551</b>	<b>\$4,048</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10</b>	<b>\$123</b>	<b>\$123</b>	<b>\$1,896</b>	<b>\$1,896</b>	<b>\$0</b>
<b>METROPOLITAN TUNNEL LOOP</b>	60035 6273 Feasibility Study	TBS	Jun-2001	Dec-2002	\$222	\$0	\$222				\$0			\$12	\$140	\$70
	<b>Project Total:</b>				<b>\$222</b>	<b>\$0</b>	<b>\$222</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$12</b>	<b>\$140</b>	<b>\$70</b>
<b>CHICOPEE VALLEY AQUEDUCT INTERCONNECTIONS</b>	60036 6274 Design/C&I	TBS	Jul-2000	Nov-2004	\$970	\$0	\$970				\$0					\$508
	60037 6275 Construction	TBS	Apr-2003	Nov-2004	3,180	0	3,180				0			\$231	\$231	3,180
	<b>Project Total:</b>				<b>\$4,150</b>	<b>\$0</b>	<b>\$4,150</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$231</b>	<b>\$231</b>	<b>\$3,688</b>
	60032 6276 Preliminary Permit Studies	TBS	Sep-97	May-98	\$42	\$0	\$42	\$5	\$13	\$13	\$11	\$42	\$0			\$0
	60033 6277 Licensing & Detail Design	TBS	Aug-98	Oct-99	43	0	43				0	30	13			0
	<b>Project Total:</b>				<b>\$85</b>	<b>\$0</b>	<b>\$85</b>	<b>\$5</b>	<b>\$13</b>	<b>\$13</b>	<b>\$11</b>	<b>\$42</b>	<b>\$30</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

WATERWORKS SYSTEM IMPROVEMENTS PROGRAM CAPITAL EXPENDITURE FORECAST FY 1998-2007 (\$000)																
PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
FINAL PAYMENTS & RELEASE OF RETAINAGE																
58744 5231 Inspection - Value				\$0	\$0	\$0					\$0					\$0
58747 5045 Construction - Valves	TBS			0	0	0					0					0
58782 5281 Tran Maint Dsg/CS	Barrientos			582	582	0					0					0
58783 5282 Tran Main/Dsg/CS	SAE Americom			4,262	4,262	0					0					0
60011 6020 Tran Main/HVAC	TBS			242	242	0					0					0
58785 5968 Technical Assistance	Various			26	26	0					0					0
58965 5286 Weston Chlor/Dstr/ICS	Hayden Wegman			279	279	0					0					0
58966 5287 Weston Chlor/Const.	Wes Construct			2,363	2,363	0					0					0
FINAL PAYMENTS TRANSMISSION TOTAL:				\$7,754	\$7,754	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUB TOTAL: TRANSMISSION				\$644,743	\$107,678	\$537,065	\$18,196	\$18,514	\$25,116	\$27,433	\$90,259	\$117,633	\$109,606	\$87,995	\$70,499	\$61,073

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(\$000)

PROJECT	Project Participants	Notice to Proceed Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>H. DISTRIBUTION AND PUMPING:</b>															
<b>VALVE REPLACEMENT</b>															
Contractor Work:															
67559 5126 Construction 1	Umbro & Sons	Nov-95	\$717	\$717	\$0						\$0				\$0
68012 6105 Construction Phase 2	TBS	Oct-97	1,651	0	1,651						908				0
68039 6278 Construction Phase 3	TBS	Oct-99	1,699	0	1,699						0	765	934		0
68079 6345 Construction Phase 4	TBS	Oct-2001	1,699	0	1,699						0	0	0	765	934
68080 6346 Construction Phase 5	TBS	Oct-2003	1,699	0	1,699						0	0	0	1,699	0
In-House Work:															
68018 6111 Equip Purchase FY97-06	Various	Jul-96	4,527	395	4,132	113	113	113	113	452	460	460	460	460	1,840
68005 6088 Linestops FY96	Various	Oct-95	17	17	0						0	0			0
68006 6089 Main Line Valves	Deleted	Deleted	0	0	0						0				0
67560 5124 Technical Assistance	Various	Oct-95	17	17	0						0				0
<b>Project Total:</b>			<b>\$12,026</b>	<b>\$1,146</b>	<b>\$10,880</b>	<b>\$113</b>	<b>\$360</b>	<b>\$361</b>	<b>\$361</b>	<b>\$1,195</b>	<b>\$1,368</b>	<b>\$1,225</b>	<b>\$1,394</b>	<b>\$1,225</b>	<b>\$4,473</b>

<b>CATHODIC PROTECTION OF DISTRIBUTION MAINS</b>															
68002 6058 Planning Phase 1	Contract Employee	Apr-95	\$157	\$109	\$48	\$12	\$12	\$12	\$12	\$48	\$0				\$0
68013 6106 Planning Phase 2	TBS	Jul-99	64	0	64					0		32	32		0
<b>Project Total:</b>			<b>\$221</b>	<b>\$109</b>	<b>\$112</b>	<b>\$12</b>	<b>\$12</b>	<b>\$12</b>	<b>\$12</b>	<b>\$48</b>	<b>\$0</b>	<b>\$32</b>	<b>\$32</b>	<b>\$0</b>	<b>\$0</b>

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(\$000)

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
BOSTON LOW SERVICE PIPE AND VALVE REHABILITATION	Black & Veatch Black & Veatch TBS Various TBS TBS	Sep-84	Feb-91	\$297	\$297	\$0										\$0
		Jun-92	Apr-2007	957	501	456	18	18	18	18	72	71	59			254
		Apr-98	Apr-2007	2,123	0	2,123			65	65	65	264	220			1,574
		Feb-95	Dec-95	892	892	0										0
		May-98	Apr-2000	7,530	0	7,530			654	654	654	3,740	3,136			0
		Apr-2005	Apr-2007	13,919	0	13,919					0	0	0			0
		Project Total:		\$25,718	\$1,690	\$24,028	\$18	\$18	\$18	\$737	\$791	\$4,075	\$3,415		\$0	\$15,747
REHABILITATION OF WESTON AQUEDUCT SUPPLY MAIN (WASH) 1 & 2	CDM TBS TBS TBS TBS TBS TBS	Jun-97	May-2008	\$5,397	\$41	\$5,356	\$124	\$124	\$124	\$124	\$496	\$498	\$877	\$716	\$9	\$2,760
		Dec-99	Jul-2001	13,576	0	13,576							6,518	6,968	90	0
		Sep-2005	May-2008	14,200	0	14,200										0
		Dec-98	Nov-99	57	0	57							33	24		14,200
		Sep-2004	Aug-2005	62	0	62										0
		Project Total:		\$33,292	\$41	\$33,251	\$124	\$124	\$124	\$124	\$496	\$531	\$7,419	\$7,684	\$99	\$17,022
																62
NONANTUM ROAD PIPE REHABILITATION	P. Callaco Corp Various Various	Mar-96	May-97	\$1,963	\$1,963	\$0										\$0
		Jan-91	Dec-92	\$157	157	0										0
		Jan-91	Mar-97	16	16	0										0
		Project Total:		\$2,136	\$2,136	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM**  
**CAPITAL EXPENDITURE FORECAST FY 1988-2007**  
(\$000)

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>WARREN COTTAGE LINE REHABILITATION</b>																
68081 6285 Construction	TBS	Oct-2000	Nov-2001	\$1,583	\$0	\$1,583					\$0	\$0		\$1,088	\$495	\$0
68082 6286 Esplanants	TBS	Oct-99	Sep-2000	13	0	13					0	0	7	6	0	0
Project Total:				\$1,596	\$0	\$1,596	\$0	\$0	\$0	\$0	\$0	\$0	\$7	\$1,094	\$495	\$0
<b>SOUTHERN SERVICE IMPROVEMENTS</b>																
67612 5119 Des/CS/RI - H.P. Ave.	Black & Veatch	Jul-91	Aug-2000	\$1,282	\$341	\$941	\$41	\$41	\$41	\$41	\$164	\$303	\$403	\$71	\$0	\$0
67602 5125 Design HP Ave - Yd Pipe	Whitman&Howard	Apr-82	Oct-83	81	81	0					0	0	0	0	0	0
67608 5190 C1 - HP Yard Piping	Deleted	N/A	N/A	0	0	0					0	0	0	0	0	0
68024 6138 Con-HP Pipeline	TBS	Dec-98	Aug-2000	3,891	0	3,891	0				0	1,297	2,223	371	0	0
68046 6287 EastLand HP Pipeline	TBS	Jul-98	Nov-98	29	0	29	0				0	29	0	0	0	0
68034 6195 HP PermiuRoad	City of Boston	Oct-96	Nov-96	10	10	0	0				0	0	0	0	0	0
67604 5187 Des/CS/RI - Newt PS	Fav/Spof,Thorn	Feb-88	Oct-97	923	923	0	0				0	0	0	0	0	0
67607 5195 Const. Newt PS -Ph 1	WES Const.	May-90	Jul-91	190	190	0	0				0	0	0	0	0	0
67608 5101 Const. Newt PS -Ph 2	Barletta Eng Corp	May-95	Oct-97	2,697	2,697	163	119	44			163	0	0	0	0	0
67605 5189 Des/CS/RI - \$4,95,96	Black & Veatch	Jul-88	Jun-93	709	709	0	0				0	0	0	0	0	0
67611 5205 Const. - Sec. 96	Zenone Inc.	Oct-91	Jun-93	2,025	2,025	0	0				0	0	0	0	0	0
67609 5198 Const. - Sec. 94	Methuen Const.	May-91	Mar-92	1,569	1,569	0	0				0	0	0	0	0	0
67615 5121 Boston Paving	City of Boston			456	456	0	0				0	0	0	0	0	0
67613 5881 Technical Assistance	Various	Jul-90	Aug-2000	31	31	0	0				0	0	0	0	0	0
Project Total:				\$14,056	\$8,032	\$5,024	\$160	\$85	\$41	\$41	\$327	\$1,829	\$2,826	\$442	\$0	\$0

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM**  
**CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(\$000)

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>HEATH HILL RD PIPE REPLACEMENT</b>																
67639 5192 Des/CS/RI- Sec. 52 Phs1	Black & Veatch	May-89	Apr-92	\$209	\$209	\$0					\$0					\$0
68047 6288 Des/CS/RI- Sec. 52 Phs2	TBS	Mar-99	Sep-2003	1,367	0	1,367					0	86	258	257	332	\$434
67645 6042 Const. - Sect. 52 New	Albanese Brothers	Apr-96	Feb-98	807	632	175	66	66	43		175					0
67642 5194 Const. - Sect. 52 Rehab	TBS	Sep-2001	Sep-2003	6,443	0	6,443					0				2,577	3,866
67640 5206 Des/CS/RI- Sec. 58,20,19	Weston Sampson	Jan-91	Jun-99	1,170	685	505	63	63	63	63	252	253			0	0
67643 5102 Const. - Sect. 58,20,19	TBS	Jun-97	Jun-99	6,244	250	5,994	784	784	645	784	2,997	2,997			0	0
67644 5985 Technical Assistance	Various	May-89	Sep-2003	14	14	0					0				0	0
68008 6100 Legal/Easements New	Various	Jan-95	Dec-95	16	16	0					0				0	0
68048 6289 Legal/Easements Rehab	TBS	Sep-2000	Aug-2001	27	0	27					0			20	7	0
<b>Project Total:</b>				<b>\$16,297</b>	<b>\$1,786</b>	<b>\$14,511</b>	<b>\$913</b>	<b>\$913</b>	<b>\$751</b>	<b>\$847</b>	<b>\$3,424</b>	<b>\$3,336</b>	<b>\$258</b>	<b>\$277</b>	<b>\$2,916</b>	<b>\$4,300</b>
<b>SOUTHERN SPINE DISTRIBUTION MAINS</b>																
Phase Sec 21, 43, & 22:																
68083 6290 Design/CS/RI	TBS	Jun-2000	Nov-2005	4,082	\$0	\$4,082					\$0					\$2,625
68084 6291 Easements	TBS	Mar-2002	Feb-2003	118	0	118					0				700	\$2,799
68085 6292 Construction	TBS	Mar-2003	Nov-2005	19,066	0	19,066					0		58	689	39	19,066
Phase Sec 19:																
68086 6293 Design/CS/RI	TBS	Jun-2003	Nov-2007	\$1,279	0	1,279					0					1,279
68087 6294 Easements	TBS	Mar-2005	Feb-2006	29	0	29					0				29	0
68088 6295 Construction	TBS	Mar-2006	Nov-2007	6,031	0	6,031					0					6,031
Phase Sec 20 & 58:																
68089 6296 Design/CS/RI	TBS	Jun-2005	Nov-2009	1,317	0	1,317					0					1,317
68090 6297 Easements	TBS	Mar-2007	Feb-2008	45	0	45					0				45	0
68091 6298 Construction	TBS	Mar-2008	Nov-2009	6,206	0	6,206					0					6,206
<b>Project Total:</b>				<b>\$38,173</b>	<b>\$0</b>	<b>\$38,173</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$58</b>	<b>\$689</b>	<b>\$739</b>	<b>\$36,677</b>

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
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(\$000)**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 9/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
SOUTHERN EXTRA HIGH SECTION 41, 42, & 74	SEA	Apr-97	Feb-2002	\$1,591	\$52	\$1,539	\$52	\$52	\$52	\$52	\$208	\$208	\$208	\$491	\$422	\$0
	68014 6107 Design/CAR/I	Nov-99	Oct-2000	70	0	70					0	0	46	24	0	0
	68049 6299 Easements	Nov-2000	Feb-2002	6,697	0	6,697					0	0	0	3,348	3,349	0
	68050 6300 Construction						\$52	\$52	\$52	\$52	\$208	\$208	\$255	\$3,883	\$3,771	\$0
	<b>Project Total:</b>			<b>\$8,358</b>	<b>\$52</b>	<b>\$8,306</b>	<b>\$52</b>	<b>\$52</b>	<b>\$52</b>	<b>\$52</b>	<b>\$208</b>	<b>\$208</b>	<b>\$255</b>	<b>\$3,883</b>	<b>\$3,771</b>	<b>\$0</b>
CHESTNUT HILL CONNECTING MAINS	TBS	Oct-98	Jul-2000	\$476	\$0	\$476					\$0	\$194	\$260	\$22	\$0	\$0
	68026 6141 Routing Study	Dec-2001	Dec-2007	1,484	0	1,484					0	0	0	90	1,384	0
	68051 6301 Design/CAR/I	Jun-2006	Dec-2007	7,042	0	7,042					0	0	0	0	7,042	0
	68052 6302 Construction	Jun-2005	May-2006	39	0	39					0	0	0	0	39	0
	68053 6303 Easements						\$0	\$0	\$0	\$0	\$0	\$194	\$260	\$22	\$90	\$0
	<b>Project Total:</b>			<b>\$9,041</b>	<b>\$0</b>	<b>\$9,041</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$194</b>	<b>\$260</b>	<b>\$22</b>	<b>\$90</b>	<b>\$8,475</b>
NEWTON SERVICE IMPROVEMENTS	TBS	Nov-97	Sep-99	\$7,625	\$0	\$7,625	\$331	\$995	\$995	\$995	\$3,316	\$3,978	\$331		\$0	\$0
	68015 6108 Construction Sec 95 & 100	Sep-96	Aug-97	67	34	33	33				33	0	0	0	0	0
	68016 6109 Easement Sec 95 & 100	Oct-93	Sep-99	20	20	0	0				0	0	0	0	0	0
	67910 5164 Technical Assistance	Oct-95	Dec-95	7	7	0	0				0	0	0	0	0	0
	68009 6101 Tree Replacement						\$364	\$995	\$995	\$995	\$3,349	\$3,978	\$331	\$0	\$0	\$0
	<b>Project Total:</b>			<b>\$7,719</b>	<b>\$61</b>	<b>\$7,658</b>	<b>\$364</b>	<b>\$995</b>	<b>\$995</b>	<b>\$995</b>	<b>\$3,349</b>	<b>\$3,978</b>	<b>\$331</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM**  
**CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(\$1000)

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>COMMONWEALTH AVENUE PUMP STATION MODERNIZATION</b>																
67649 5079 Prel.Design	Fay,Spt,Thorn	Feb-88	Aug-89	\$118	\$118	\$0					\$0					\$0
67652 5084 Fl.Design/CS/RI	Black & Veatch	May-92	Oct-99	1,622	1,017	605	67	67	67	67	268	269	68			0
67650 5080 Constr. - Ph 1	WES Const.	May-90	Jul-91	63	63	0					0					0
67651 6132 Constr. - Ph 2	TBS	Oct-97	Oct-99	5,088	0	5,088	660	511	661		1,832	2,442	814			0
68022 6127 PCB Abatement	Various	Apr-96	Jun-97	2	2	0					0					0
67983 6023 Land	Various	Jul-95	Sep-96	19	19	0					0					0
67985 6025 DEP Fees	DEP	Apr-95	Jun-98	3	1	2	1				1	1				0
68003 6064 Appraisal	Various	Jul-94	Dec-96	3	3	0					0					0
67979 6004 Technical Assistance	Various	Feb-88	Oct-99	60	60	0					0					0
<b>Project Total:</b>				<b>\$6,978</b>	<b>\$1,283</b>	<b>\$5,695</b>	<b>\$87</b>	<b>\$727</b>	<b>\$579</b>	<b>\$728</b>	<b>\$2,101</b>	<b>\$2,712</b>	<b>\$882</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

<b>LEXINGTON STREET PUMP STATION REHABILITATION</b>																
67677 5081 Design/CS/RI	Fay,Spt,Thorn	Feb-88	Oct-97	\$738	\$566	\$172	\$141	\$31			\$172	\$0				\$0
67678 5082 Constr. - Ph 1	WES Const.	May-90	Jul-91	166	166	0					0	0				0
67680 5083 Constr. - MDPW	Mass DPW	Jul-90	Jul-91	332	332	0					0	0				0
67679 5127 Constr. - Ph 2	Barietta Eng Corp	May-95	Oct-97	2,209	1,384	225	167	56			225	0				0
67984 6024 Land	Various	Nov-94	Sep-95	6	6	0					0	0				0
<b>Project Total:</b>				<b>\$3,451</b>	<b>\$3,054</b>	<b>\$397</b>	<b>\$308</b>	<b>\$89</b>	<b>\$0</b>	<b>\$0</b>	<b>\$397</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

<b>REHABILITATION OF OTHER PUMPING STATIONS</b>																
67885 5153 Preliminary design	Fay,Spt,Thorn	Aug-94	Mar-96	\$401	\$401	\$0					\$0					\$0
68017 6110 Design/CS/RI	Black & Veatch	May-97	Nov-2004	3,967	81	3,886	123	123	123	123	492	533	544	475	668	1,174
68072 6304 Con Interim Automation	TBS	Apr-99	Jan-2000	1,020	0	1,020					0	306	714			0
68102 6375 Con Balmont & Hyde Park	TBS	Nov-2000	Nov-2002	4,019	0	4,019					0	0		804	1,329	1,286
68103 6376 Con Battle Court & Res R	TBS	Nov-2001	Nov-2003	2,758	0	2,758					0	0			551	2,207
68104 6377 Con Spring St & Some Hyd	TBS	Nov-2002	Nov-2004	1,952	0	1,952					0	0				1,562
<b>Project Total:</b>				<b>\$13,727</b>	<b>\$482</b>	<b>\$13,245</b>	<b>\$123</b>	<b>\$123</b>	<b>\$123</b>	<b>\$123</b>	<b>\$492</b>	<b>\$839</b>	<b>\$1,258</b>	<b>\$1,279</b>	<b>\$3,148</b>	<b>\$6,228</b>

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM**  
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(\$000)

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY2000	FY2001	FY2002	Beyond FY2002
<b>BEAR HILL IMPROVEMENTS - SECTION 29 REHABILITATION</b>	68092 6305 Construction	TBS	Mar-2006	Nov-2006	\$1,458	\$0	\$1,458				\$0	\$0			
	68093 6306 Easements	TBS	Mar-2006	Feb-2006	14	0	14				0	0			\$1,458
	Project Total:				\$1,472	\$0	\$1,472				\$0	\$0	\$0	\$0	\$1,472
<b>SPOT POND PUMP STATION REHABILITATION</b>	67701 5249 Pump	Gen Electric	Aug-86	Aug-86	\$70	\$0					\$0	\$0			\$0
	67702 5076 Electrical Upgrade	Richardson	May-84	Sep-87	200	200	0				0	0			0
	67709 5074 Const. - Diesel Ex.	P.J. Kennedy	Apr-88	Dec-88	60	60	0				0	0			0
	67703 5077 Design/CSRI - P.S.	Fav/Spot Thorn	Feb-88	Oct-97	1,811	1,759	52				52	0			0
	67707 5078 Const. - P.S. - Ph 1	WES Const	May-90	Jul-91	630	630	0				0	0			0
	67708 5051 Const. - P.S. - Ph 2	Barletta Eng Corp	May-95	Oct-97	11,591	11,048	543				543	0			0
	67708 5240 Spot Pond PS Eng. 29	Wes Construction	Jul-94	Jul-95	273	273	0				0	0			0
	67998 6038 Hydraulic Trmt. Analysis	Beta Engineering	Apr-95	Sep-95	61	61	0				0	0			0
	67716 5047 Oil Control Plan	P.R. Johnson	Aug-92	Dec-92	171	171	0				0	0			0
	67717 5050 Drain Line Cleaning	H.L. Smith, Inc	Nov-92	Jan-93	268	268	0				0	0			0
	67704 5072 Des/CSRI-Suct Pipe	Weston Sampson	Jul-90	Apr-98	1,638	1,291	347				347	0			0
	67705 5071 Study - Suction Pipe	Weston Sampson	Nov-89	Nov-90	476	476	0				0	0			0
	67706 5073 Const.-Suction Pipe	Gloesoe and Sons	Oct-95	Apr-98	11,557	10,657	900				900	0			0
	68054 6307 Tudor Barn	TBS	Aug-97	Nov-97	0	0	0				0	0			0
	68105 6378 Fells Area Paving	TBS	Aug-97	Nov-97	368	0	368				368	0			0
	67994 6030 Paving-Highland Ave	City of Malden	Oct-94	Nov-94	86	86	0				0	0			0
	67720 5219 Const-Rehab Discharge	TBS	Sep-99	Nov-2000	1,530	0	1,530				0	895	635		0
	67719 5144 Const - Sewer P.S.	Barletta Eng Corp	May-96	May-97	214	214	0				0	0			0
	67714 5983 Technical Assistance	Various	May-84	Dec-2000	144	144	0				0	0			0
	67718 5053 Env Assess & Ren Plan	Stone & Webster	Oct-94	Aug-98	350	216	134				108	26			0
	68055 6308 Remedial Action Plan	TBS	Oct-98	Jul-99	1,674	0	1,674				0	1,507	167		0
	68056 6309 Design-SP Const. Office	On-Hold			0	0	0				0	0			0
	68057 6310 Constr-SP Const. Office	On-Hold			0	0	0				0	0			0
	67991 6027 DEP Review Fees	DEP	Jul-94	Apr-99	10	4	6				0	6			0
	Project Total:				\$33,182	\$27,828	\$5,554	\$1,034	\$717	\$395	\$2,318	\$1,539	\$835	\$0	\$0

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(\$000)

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<b>WESTON AQUEDUCT AND SUPPLY MAIN (WASH) 4</b>																
67865 5147 Design/CAIRI	CDM	Mar-95	Jan-2004	\$4,791	\$1,718	\$3,073	\$116	\$116	\$117	\$117	\$466	\$467	\$467	\$467	\$467	\$739
68030 6174 Appraisal/Essement	TBS	Mar-95	Feb-2001	129	7	122	7	7	7	7	28	31	31	32	0	0
68088 6311 Construction Contract 1	Deleted	Deleted	Deleted	0	0	0	0	0	0	0	0	0	0	0	0	0
68031 6175 Construction Contract 2	TBS	Jun-97	Nov-98	3,954	188	3,756	553	583	712	712	2,570	1,186	5,666	0	0	0
68069 6312 Construction Contract 3	TBS	Jun-98	Dec-99	15,595	0	15,595	0	0	0	954	954	8,985	0	0	0	0
68070 6313 Construction Contract 4	TBS	Jan-2001	Jan-2004	19,914	0	19,914	0	0	0	0	0	0	0	0	0	0
68032 6176 Const - Meter 103	TBS	Jan-2001	Oct-97	60	0	60	60	60	0	0	60	0	0	0	0	0
68071 6314 Const - Bridge Crossing	TBS	Feb-2001	Dec-2001	1,156	0	1,156	0	0	0	0	0	0	0	0	0	0
59774 5034 Const. Newton Wtr Mains	Walsh CO	Apr-95	Oct-96	706	706	0	0	0	0	0	0	0	0	525	631	0
59776 5975 Technical Assistance	Various	Mar-95	Jan-2004	104	104	0	0	0	0	0	0	0	0	0	0	0
<b>Project Total:</b>				<b>\$46,409</b>	<b>\$2,733</b>	<b>\$43,676</b>	<b>\$676</b>	<b>\$776</b>	<b>\$836</b>	<b>\$1,790</b>	<b>\$4,078</b>	<b>\$10,669</b>	<b>\$6,154</b>	<b>\$4,252</b>	<b>\$7,557</b>	<b>\$10,966</b>
<b>SPOT POND SUPPLY MAINS - REHABILITATION</b>																
Preliminary Study	TBS	N/A	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0
68038 6223 Pre Ops & Design/CAIRI	TBS	Aug-97	Mar-2008	9,416	0	9,416	163	245	245	245	898	981	443	335	723	6,036
68059 6316 Esasments CP1	TBS	Mar-2001	Feb-2002	75	0	75	0	0	0	0	0	0	0	25	50	0
68106 6379 Esasments CP2	TBS	Mar-2003	Feb-2004	67	0	67	0	0	0	0	0	0	0	0	0	67
68107 6380 Esasments CP3	TBS	Mar-2005	Feb-2006	71	0	71	0	0	0	0	0	0	0	0	0	71
68060 6317 Construction CP1	TBS	Mar-2002	Mar-2004	16,071	0	16,071	0	0	0	0	0	0	0	0	0	13,500
68108 6381 Construction CP2	TBS	Mar-2004	Mar-2006	13,937	0	13,937	0	0	0	0	0	0	0	0	0	13,937
68109 6382 Construction CP3	TBS	Mar-2006	Mar-2008	16,015	0	16,015	0	0	0	0	0	0	0	0	0	16,015
Equipment Purch-Valve	TBS	N/A	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Project Total:</b>				<b>\$55,652</b>	<b>\$0</b>	<b>\$55,652</b>	<b>\$163</b>	<b>\$245</b>	<b>\$245</b>	<b>\$245</b>	<b>\$898</b>	<b>\$981</b>	<b>\$443</b>	<b>\$360</b>	<b>\$3,344</b>	<b>\$49,026</b>

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(\$000)

PROJECT	Project Participants	Notice to Proceed Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
NORTHERN LOW SERVICE PIPELINE REPLACEMENT	67736 5199 Des/CS/R/L-Medford Phs1	Aug-88	\$221	\$221	\$0										
	68019 6112 Des/CS/R/L-Medford Phs2	May-92													
	67739 5198 Constr. - Medford	Delete Apr-98	600	0	600				300						
	68062 6319 Esasments-Medford	Feb-98		1	0			1							
	Project Total:	Mar-98	\$822	\$221	\$601	\$0	\$0	\$1	\$300	\$301	\$300	\$0	\$0	\$0	\$0
WATER MAIN RELOCATION IN CHELSEA RIVER	68023 6135 Planning/Design/CARL	Aug-97	\$1,097	\$0	\$1,097	\$38	\$57	\$57	\$58	\$210	\$230	\$600	\$57		\$0
	68063 6320 Construction	Oct-99	0	0	0					0	0	0			0
	Project Total:	Aug-2000	\$1,097	\$0	\$1,097	\$38	\$57	\$57	\$58	\$210	\$230	\$600	\$57	\$0	\$0
NORTH LOW SERVICE- SECTIONS 8 & 57	68094 6321 Esasments	Jul-2004	\$54	\$0	\$54										\$54
	68095 6322 Construction	Jun-2005	7,455	0	7,455					\$0	\$0	\$0			7,455
	Section 57:	Jul-2005	0	0	0					0	0	0			0
	68096 6323 Esasments	Jul-2002	18	0	18					0	0	0			18
	68097 6324 Construction	Jul-2003	3,654	0	3,654					0	0	0			3,654
Project Total:		Nov-2004	\$11,181	\$0	\$11,181	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,181

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PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>NEW CONNECTING MAINS - SHAFT 7 TO WASM 3</b>																
67992 6028 Construction 1-Watertown	City of Watertown	Jul-96	Sep-96	\$167	\$167	\$0					\$0	\$0				\$0
67846 5163 Routing Study	Weston & Sampson	Aug-94	Nov-96	408	408	0					0	0				0
68110 6383 Design/CA/RI CP1	TBS	Jul-98	Dec-2005	4,283	0	4,283					0	404	494	494	494	2,307
68118 6391 Construction CP1	TBS	Aug-2001	Dec-2005	21,419	0	21,419					0	0	0	0	0	21,419
68114 6387 Easements CP1	TBS	Aug-2001	Jul-2002	109	0	109					0	0	0	0	9	9
68111 6384 Design/CA/RI CP2	TBS	Dec-2001	Feb-2008	815	0	815					0	0	0	0	100	57
68119 6392 Construction CP2	TBS	Nov-2005	Feb-2008	4,071	0	4,071					0	0	0	0	0	758
68115 6388 Easements CP2	TBS	Nov-2005	Feb-2008	52	0	52					0	0	0	0	0	4,071
68112 6385 Design/CA/RI CP3	TBS	Jun-2002	Oct-2005	2,141	0	2,141					0	0	0	0	0	52
68120 6393 Construction CP3	TBS	Jan-2008	Jan-2011	10,710	0	10,710					0	0	0	0	14	2,127
68116 6389 Easements CP3	TBS	Mar-2007	Feb-2008	60	0	60					0	0	0	0	0	10,710
68113 6386 Design/CA/RI CP4	TBS	Jun-2005	Mar-2012	938	0	938					0	0	0	0	0	60
68121 6394 Construction CP4	TBS	Dec-2010	Mar-2012	4,691	0	4,691					0	0	0	0	0	938
68117 6390 Easements CP4	TBS	Dec-2009	Nov-2010	38	0	38					0	0	0	0	0	4,691
68028 6143 Design/CA/RI 2	TBS			0	0	0					0	0	0	0	0	38
68064 6325 Construction 2	TBS			0	0	0					0	0	0	0	0	0
68065 6326 Easements 2	TBS			0	0	0					0	0	0	0	0	0
68066 6327 Constr Intermediate High	TBS			0	0	0					0	0	0	0	0	0
68067 6328 Easements Intrmd High	TBS			0	0	0					0	0	0	0	0	0
<b>Project Total:</b>				<b>\$49,902</b>	<b>\$375</b>	<b>\$45,327</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$494</b>	<b>\$494</b>	<b>\$494</b>	<b>\$685</b>	<b>\$47,180</b>
<b>NORTHERN HIGH SERVICE - REPLACE SECTION 26</b>																
67950 5203 Design/CA/RI	Deleted	Deleted	Deleted	\$0	\$0	\$0					\$0	\$0				\$0
68073 6329 Easements	Deleted	Deleted	Deleted	0	0	0					0	0				0
68074 6330 Construction	Deleted	Deleted	Deleted	0	0	0					0	0				0
<b>Project Total:</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(\$1000)

PROJECT	Project Participants	Notice to Proceed Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
NORTHERN HIGH SERVICE- CONNECTING MAINS FROM SECTION 91															
	SEA	Jun-95		\$1,104	\$371	\$733	\$34	\$34	\$34	\$136	\$137	\$137	\$137	\$137	\$49
	TBS	Feb-99		42	0	42				0	17	25			
	TBS	Feb-2000		3,033	0	3,033				0	459	1,103	1,103	1,103	368
	Project Total:		\$4,179	\$371	\$3,808	\$34	\$34	\$34	\$34	\$136	\$154	\$621	\$1,240	\$1,240	\$417
NORTHERN HIGH SERVICE PIPE IMPROVEMENTS - LYNN PIPELINE	LEA	Apr-88		\$1,239	\$1,239	\$0				\$0					\$0
	GHR	Nov-88		389	307	92	14	15	15	58	34				0
	J. Biotti	Jun-88		3,804	3,804	0				0	0				0
	TBS	Aug-88		2,600	0	2,600				0	1,084				0
	J D'Amico	Nov-88		1,746	1,746	0	216	650	650	1,516	0				0
	Boston Gas	Dec-89		98	98	0				0	0				0
	City of Lynn	Apr-88		15	15	0				0	0				0
	Giosso & Sons	Oct-89		4,384	4,384	0				0	0				0
	Various	Jul-91		2	2	0				0	0				0
	Various	Jan-97		170	170	0				0	0				0
	Various	Jun-82													
	Project Total:		\$14,457	\$11,765	\$2,692	\$14	\$230	\$665	\$665	\$1,574	\$1,118	\$0	\$0	\$0	\$0
NORTHERN HIGH SERVICE - SECTION 27 IMPROVEMENTS															
	TBS	Jul-98		\$10	\$0	\$10				\$0	\$10				\$0
	TBS	Sep-2000		2,945	0	2,945				0	0			1,963	982
	Project Total:		\$2,955	\$0	\$2,955	\$0	\$0	\$0	\$0	\$0	\$10	\$0	\$1,963	\$882	\$0

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$000)**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY2000	FY2001	FY2002	Beyond FY2002
<b>NORTHERN HIGH SERVICE. REVERE &amp; MALDEN PIPELINE IMPROVEMENTS</b>	67780 5185 Des/CS/RI- Rev/Mald	May-88	Sep-94	\$1,668	\$1,528	\$140	\$140				\$0				\$0
	67781 5186 Constr. - Revere Bch	Aug-92	Oct-94	6,327	6,327	0					0				0
	67782 5176 Constr. - Malden 53	Apr-92	Sep-94	10,026	10,026	0					0				0
	68020 6113 Landscape Mal Sec 53	Apr-96	Jun-96	20	20	0					0				0
	67794 5175 Const. Asst. - Malden	Sep-91	Jun-96	0	0	0					0				0
	67792 5238 Constr. - Linden Sqre	Apr-91	Nov-91	1,849	1,849	0					0				0
	67783 5239 C.A. - Linden Sqre	Apr-91	Nov-91	125	125	0					0				0
	67784 5177 Constr. - Revere 53	Jun-2000	Jun-2001	2,819	0	2,819					0	226	2,593		0
	68078 6334 Easements Revere 53	Jun-99	May-2000	35	0	35					0	50			0
	67996 6033 Des/CA/RI/Rd Restoration	Nov-94	Dec-95	129	129	0					0				0
	67997 6034 Construct-Rd Restoration	Jun-95	Jun-96	1,714	1,714	0					0				0
	68033 6183 Sidewalk Restorations	Sep-96	Oct-96	54	54	0					0				0
	67785 5191 Constr. - C. Valves	Jun-88	Aug-89	949	949	0					0				0
	67786 5179 Constr. - DI Pipe C&L	Jun-90	Sep-90	158	158	0					0				0
	67787 5178 Constr. - Win. C+L	Jun-90	Aug-90	575	575	0					0				0
	67790 6335 Constr. - 68 & 53A	Jun-2002	Nov-2003	3,890	0	3,890					0			216	3,674
	67791 5986 Technical Assistance	May-98	Nov-2003	183	183	0					0				0
	<b>Project Total:</b>			<b>\$30,521</b>	<b>\$23,437</b>	<b>\$6,884</b>	<b>\$140</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$140</b>	<b>\$256</b>	<b>\$2,593</b>	<b>\$216</b>	<b>\$3,674</b>
<b>NORTHERN HIGH SERVICE PIPELINE REHABILITATION</b>	68098 6336 Design/CA/RI	May-2002	Nov-2006	\$2,558	\$0	\$2,558					\$0			\$138	\$2,420
	68099 6337 Appraisal/Easement	Feb-2004	Jan-2005	136	0	136					0				136
	68100 6338 Construction	Feb-2005	Nov-2006	12,039	0	12,039					0				12,039
	<b>Project Total:</b>			<b>\$14,733</b>	<b>\$0</b>	<b>\$14,733</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$138</b>	<b>\$14,595</b>

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(\$'000)

PROJECT	Project Participants	Notice to Proceed Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>NORTHERN EXTRA HIGH SERVICE NEW PIPELINES</b>	67970 5242 Design/CA/RI	Sep-94 Jun-2000	\$746	\$226	\$520	\$19	\$19	\$19	\$19	\$76	\$149	\$295			\$0
	67971 6339 Appraisal/Easement	Mar-98 Feb-99	22	0	22					0	22				0
	67972 6340 Construction	Mar-99 Jun-2000	2,524	0	2,524					0	620	1,904			0
	68010 6099 Construction - Rehab	N/A	0	0	0					0	0				0
	68010 6099 Regulatory Compliance	Nov-95 Jun-96	1	1	0					0	0				0
<b>Project Total:</b>			\$3,293	\$227	\$3,066	\$19	\$19	\$19	\$19	\$76	\$791	\$2,199	\$0	\$0	\$0

<b>HYDRAULIC MODEL UPDATE</b>															
68101 6342 Hydraulic Model Update	TBS	Jul-98 Jul-2000	\$326	\$0	\$326					\$0	\$157	\$156	\$13		\$0
<b>Project Total:</b>			\$326	\$0	\$326	\$0	\$0	\$0	\$0	\$0	\$157	\$156	\$13	\$0	\$0

<b>SUB TOTAL: DISTRIBUTION AND PUMPING</b>															
			\$462,970	\$88,029	\$374,941	\$4,372	\$5,576	\$5,308	\$7,303	\$22,559	\$35,319	\$30,011	\$28,393	\$26,625	\$232,034

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998-2007  
(\$000)**

PROJECT	Project Participants	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Remaining Balance	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>I. OTHER PROGRAMS:</b>															
<b>CENTRAL MONITORING SYSTEM EXPANSION</b>															
75300 5025 Study	O'Brien&Gere	Mar-84	Sep-86	\$190	\$190	\$0				\$0	\$0				\$0
75301 5026 Design	EMA	Oct-87	Mar-89	2,651	2,651	0				0	0				0
75304 5160 Comm. Structures	ESCOA	Nov-83	May-83	161	161	0				0	0				0
75305 5173 Constr. Services	SEA	Jul-82	Aug-88	721	521	200	43	43	43	172	28				0
75302 5027 Equip.-Purchase	Various	Oct-87	Dec-83	2,161	2,161	0				0	0				0
75306 5171 Construction Bondsville	TBS	Nov-87	Nov-86	973	209	764	127	127	127	508	256				0
75303 5028 Res. Road & Const Water	Various	Aug-86	Aug-86	3,176	1,310	1,866	215	215	215	860	861	145			0
75474 6125 Microwave Equipment	Various	Mar-86	Mar-86	780	289	471	67	67	67	268	203				0
75308 5845 Operations Center	Mello Constrct	Sep-92	Jun-94	1,499	1,499	0				0	0				0
75309 5587 Tech. Assistance	Various	Jul-92	Aug-99	323	323	0				0	0				0
75310 5216 Utility Installation	TBS	Aug-96	Aug-99	0	0	0				0	0				0
<b>Project Total:</b>				<b>\$12,615</b>	<b>\$9,314</b>	<b>\$3,301</b>	<b>\$452</b>	<b>\$452</b>	<b>\$452</b>	<b>\$1,808</b>	<b>\$1,348</b>	<b>\$145</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>REHABILITATION OF EXISTING FACILITIES</b>															
75389 5213 Constr. - Hyde Park	Fidelity International	Jan-93	Oct-93	\$397	\$397	\$0				\$0	\$0				\$0
75391 5167 Testing -Volumetric	Built-Form	Apr-91	Jun-91	22	22	0				0	0				0
75396 5207 Testing - Tracer	In-House	Jan-91	Mar-91	19	19	0				0	0				0
75397 5159 Subsurface Investig.	Roy F. Weston	Jul-91	Jul-99	562	500	62	7	7	7	28	30	4			0
75392 5168 Constr.- Tank Rem-Ph 1	Franklin Environ Servi	Aug-92	Feb-94	185	185	0				0	0				0
75399 5214 Constr.- Tank Rem-Ph 2	Zenone, Inc	Feb-95	Jul-95	98	98	0				0	0				0
75471 8032 Constr.- Tank Rem-Ph 3	D&C Construction Co	Oct-95	Jul-96	33	33	0				0	0				0
75470 8006 Constr.- Tank Replc	TBS	Sep-97	Sep-98	800	0	800	0	100	200	500	300				0
75394 5210 Constr Wallham Pipe	TBS	Feb-2007	Sep-2007	193	0	193				0	0				193
75395 5211 Constr Medford Pipe	E.A. Colangeli	Aug-92	Jul-93	417	417	0				0	0				0
75400 5169 Water Tank Inspection	Robert L. Merihew	Oct-94	Nov-94	27	27	0				0	0				0
75398 5984 Tech. Assistance	Various	Jul-91	Sep-2007	16	16	0				0	0				0
75401 5136 Constr.-Water Tank	TBS	Nov-97	Jan-2000	4,143	0	4,143	0	262	262	1,124	1,990	1,029			0
75402 5138 Constr.-Stony Brook	D'Alessandro Corp	Feb-95	Jul-96	268	268	0				0	0				0
75472 6070 Fac Main Equip Pur FY96	Various	Oct-95	Mar-96	57	57	0				0	0				0
75473 6114 Fac Main Equip Pur FY97	Various	Oct-96	Mar-98	250	250	0				0	0				0
75475 6151 Fac. Maintenance Program	Various	Jul-96	Jun-2000	4,000	1,000	3,000	250	250	250	1,000	1,000	1,000	0		0
<b>Project Total:</b>				<b>\$11,487</b>	<b>\$3,289</b>	<b>\$8,198</b>	<b>\$257</b>	<b>\$619</b>	<b>\$719</b>	<b>\$2,852</b>	<b>\$3,320</b>	<b>\$2,033</b>	<b>\$0</b>	<b>\$0</b>	<b>\$193</b>

**WATERWORKS SYSTEM IMPROVEMENTS PROGRAM**  
**CAPITAL EXPENDITURE FORECAST FY 1998-2007**  
(\$000)

PROJECT	Project Participants	Notice to Proceed	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	Beyond FY2002
<b>DISTRIBUTION SYSTEMS FACILITIES MAPPING</b>															
75458 5162 Planning/Design	CDM Boston Edison	Feb-95 Aug-96	\$948 100	\$387 100	\$561 0	\$65	\$65	\$65	\$65	\$260 \$0	\$259	\$42			\$0 0
<b>Project Total:</b>			<b>\$1,048</b>	<b>\$487</b>	<b>\$561</b>	<b>\$65</b>	<b>\$65</b>	<b>\$65</b>	<b>\$65</b>	<b>\$260</b>	<b>\$259</b>	<b>\$42</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>LOCAL WATER INFRASTRUCTURE REHABILITATION ASSISTANCE PROGRAM</b>															
75477 6343 Loans and Grants		Jul-97 Jul-99	\$30,000 (22,500)	\$0 0	\$30,000 (22,500)	\$5,000	\$5,000	\$5,000	\$5,000	\$20,000	\$10,000 (3,000)	\$0 (4,500)	\$0 (4,500)	\$0 (4,500)	\$0 (6,000)
75478 6344 Loan Repayment		Jun-99 Jun-2004				\$5,000	\$5,000	\$5,000	\$5,000	\$20,000	\$7,000	\$4,500	\$4,500	\$4,500	\$5,000
<b>Project Total:</b>			<b>\$7,500</b>	<b>\$0</b>	<b>\$7,500</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$20,000</b>	<b>\$7,000</b>	<b>\$4,500</b>	<b>\$4,500</b>	<b>\$4,500</b>	<b>\$5,000</b>
<b>SUB TOTAL: OTHER PROGRAMS</b>			<b>\$32,650</b>	<b>\$13,090</b>	<b>\$19,560</b>	<b>\$5,774</b>	<b>\$6,136</b>	<b>\$6,236</b>	<b>\$6,574</b>	<b>\$24,720</b>	<b>\$11,927</b>	<b>\$2,280</b>	<b>\$4,500</b>	<b>\$4,500</b>	<b>\$5,807</b>
<b>TOTAL WATERWORKS</b>			<b>\$1,750,139</b>	<b>\$239,590</b>	<b>\$1,510,549</b>	<b>\$34,919</b>	<b>\$37,089</b>	<b>\$42,680</b>	<b>\$51,232</b>	<b>\$165,940</b>	<b>\$188,600</b>	<b>\$190,899</b>	<b>\$225,511</b>	<b>\$233,602</b>	<b>\$506,007</b>

**BUSINESS AND OPERATIONS SUPPORT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998 - 2007  
(\$000)**

PROJECT	Project Participant	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>J. BUSINESS AND OPERATIONS SUPPORT</b>																
<b>NORTH MAINTENANCE FACILITY</b>																
Chestnut Hill																
75438 5847 Design/CS/RI	TBS	Apr-90	Mar-96	\$495	\$495	\$0					\$0	\$0				\$0
75439 5848 Construction	TBS			0	0	0					0	0				0
<b>Distribution/Maintenance Facility</b>																
92320 5886 Design/CS/RI	TBS	Jul-99	Aug-2000	1,325	0	1,325							1,050	195	80	0
92321 5952 Land/Building	TBS	Jul-98	Mar-99	4,398	3,243	4,395					4,395			3,976	2,651	0
92348 6356 Construction	TBS	Jul-2000	Jul-2001	6,627	0	6,627										0
<b>Mystic Shops</b>																
92324 6018 Design/CS/RI	TBS	Sep-2000	Dec-2001	343	0	343								198	72	73
92349 6357 Construction	TBS	Aug-2001	Oct-2002	1,970	0	1,970								1,029	1,029	941
<b>Glenwood Yard</b>																
92325 6019 Design/CS/RI	TBS	Sep-2000	Dec-2001	497	0	497								410	50	37
92350 6358 Construction	TBS	Aug-2001	Oct-2002	2,856	0	2,856									1,441	1,415
92351 6359 Tech Asst	TBS			9	9	0										0
<b>Project Total:</b>				<b>\$18,520</b>	<b>\$517</b>	<b>\$18,003</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,385</b>	<b>\$1,050</b>	<b>\$4,779</b>	<b>\$5,323</b>	<b>\$2,468</b>

**BUSINESS AND OPERATIONS SUPPORT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998 - 2007**  
(\$000)

PROJECT	Project Participant	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>FORE RIVER STAGING AREA</b>																
92147	5873 Cathodic Protection	TBS	Apr-91	\$59	\$59	\$0					\$0	\$0				\$0
92148	5874 Repair Elevators	TBS	Mar-89	6	6	0					0	0				0
92150	5877 Rehab Bldgs. 15 & 16	TBS	May-94	53	53	0					0	0				0
92151	5871 Rehab Bldg. 14	Various	May-93	164	164	0					0	0				0
92152	5593 FRSA Water Meter	Alawite	Oct-91	14	14	0					0	0				0
92153	5594 FRSA Repair Equip.	TBS	Nov-89	2	2	0					0	0				0
92154	5872 Back-Flow Preventers	TBS	Jan-89	10	10	0					0	0				0
92155	5878 PCB Transformer	Franklin	Aug-90	11	11	0					0	0				0
92157	5820 Water Tank Constr.	TBS	Jul-91	49	49	0					0	0				0
92158	5821 Fire Alarm Upgrade	TBS	Aug-90	103	103	0					0	0				0
92161	5884 Geological Storage	Various	Oct-90	23	23	0					0	0				0
92162	5949 Rectifier Install	TBS	Nov-89	9	9	0					0	0				0
92167	5870 Asbestos Removal	N American Site	Dec-90	299	299	(0)					0	0				0
92168	6001 Demolition - 86	TBS	Jul-95	143	143	0					0	0				0
92345	6360 Drydock Pumps	TBS	Jul-94	416	416	0					0	0				0
92344	6178 Geological Shelving	TBS	Jul-96	100	100	0		100			0	0				0
92346	6361 Demolition	TBS	Nov-97	0	0	0					0	0				0
18536	3839 FRSA Upland Phase II - Drs.	Pars/Bhaff/Ord	Dec-93	670	670	0					0	0				0
18017	5731 FRSA Upland Phase II - Con	Westcott Con	Jul-96	4,220	4,220	0					0	0				0
92342	6173 Inspection Equipment	Cues, Inc.	Jul-96	313	183	130			130		0	0				0
22570	5684 Hazardous Waste	PEER	May-97	665	665	0					0	0				0
92169	6005 Embankment Improvements	P. Calliaco Corp.	Dec-92	84	84	0					0	0				0
92164	5929 Building 19 Rehab	Thomas O'Connor	Oct-96	2,364	2,364	0					0	0				0
92341	6035 ESDC - Bldg 19	SAR Engineering	Nov-95	40	40	0					0	0				0
92165	5992 Tech Asst. - Bldg 19	Various	Feb-96	266	266	0					0	0				0
<b>Project Total:</b>				<b>\$10,083</b>	<b>\$9,853</b>	<b>\$230</b>	<b>\$0</b>	<b>\$100</b>	<b>\$0</b>	<b>\$130</b>	<b>\$230</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**BUSINESS AND OPERATIONS SUPPORT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998 - 2007**  
(\$000)

PROJECT	Project Participant	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 9/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
<b>TECHNICAL ASSISTANCE</b>																
516TA Sanitary	Anderson & Nichol	Mar-93	Mar-96	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			\$0
TBA Sanitary		Aug-96	Aug-99	150	0	150	13	13	13	13	50	50	50			0
517TA Electrical/HVAC	R.D.Kimball	Mar-93	Sep-96	0	0	0	0	0	0	0	0	0	0			0
TBA Electrical/HVAC		Aug-96	Aug-99	175	0	175	15	15	15	15	58	58	58			0
520TA Mechanical	Bela	Nov-93	Nov-96	0	0	0	0	0	0	0	0	0	0			0
TBA Mechanical		Nov-97	Nov-2000	150	0	150	13	13	13	13	50	50	50			0
521TA Structural	Bela	Nov-93	Nov-96	0	0	0	0	0	0	0	0	0	0			0
TBA Structural		Nov-97	Nov-2000	150	0	150	13	13	13	13	50	50	50			0
518TA Material Testing	PSI Inc	Mar-93	Sep-96	0	0	0	0	0	0	0	0	0	0			0
TBA Material Testing		Aug-96	Aug-99	150	0	150	13	13	13	13	50	50	50			0
522TA Environmental Testing	TBA	Apr-94	Apr-97	0	0	0	0	0	0	0	0	0	0			0
TBA Environmental Testing		Apr-97	Apr-2000	300	0	300	25	25	25	25	100	100	100			0
523TA Geotechnical	Garnett	Jun-92	Nov-96	0	0	0	0	0	0	0	0	0	0			0
535TA Geotechnical	Garnett	Jan-99	Jan-99	100	0	100	13	13	13	13	50	50	50			0
TBA Geotechnical		May-99	May-2000	50	0	50	0	0	0	0	0	0	0			0
536TA Surveying	HMM	Sep-95	Sep-98	100	0	100	13	13	13	13	50	50	50			0
TBA Surveying		Sep-99	Sep-99	50	0	50	0	0	0	0	0	0	0			0
511TA Hazardous Material	HMM	Dec-91	Nov-95	0	0	0	0	0	0	0	0	0	0			0
512TA Hazardous Material	HMM	Oct-95	Oct-98	0	0	0	0	0	0	0	0	0	0			0
523TA Hazardous Material	TBA	Oct-95	Oct-98	300	0	300	38	38	38	38	150	150	150			0
530TA Hazardous Material	TBA	Oct-95	Oct-98	150	0	150	0	0	0	0	0	0	0			0
531TA Hazardous Material	TBA	Oct-95	Oct-98	300	0	300	38	38	38	38	150	150	150			0
542TA Asbestos Removal	ABB Enviro	Oct-95	Oct-99	150	0	150	0	0	0	0	0	0	0			0
TBA Asbestos Removal	Peer	Oct-95	Oct-98	200	0	200	25	25	25	25	100	100	100			0
519TA Architectural/Landscaping	Archetype	Oct-98	Oct-99	100	0	100	0	0	0	0	0	0	0			0
TBA Architectural/Landscaping		Jun-92	Aug-99	0	0	0	0	0	0	0	0	0	0			0
533TA Architectural	TBA	Oct-95	Oct-98	150	0	150	13	13	13	13	50	50	50			0
TBA Architectural		Oct-95	Oct-98	100	0	100	13	13	13	13	50	50	50			0
534TA Instrument Control	Universal	Oct-98	Oct-99	50	0	50	0	0	0	0	0	0	0			0
TBA Instrument Control		May-92	Dec-98	0	0	0	0	0	0	0	0	0	0			0
509TA Wetland/Environmental	Stones/Webster	Dec-91	Dec-94	150	0	150	13	13	13	13	50	50	50			0
531TA Wetland/Permitting	TBA	Sep-95	Sep-98	100	0	100	13	13	13	13	50	50	50			0
TBA Wetland/Permitting		Sep-98	Sep-99	50	0	50	0	0	0	0	0	0	0			0
525TA Civil Engineer	Green Int'l	Oct-93	Oct-96	0	0	0	0	0	0	0	0	0	0			0
TBA Civil Engineer		Oct-97	Oct-2000	150	0	150	13	13	13	13	50	50	50			0
526TA Cost Estimating	TBA	Jul-94	Jul-99	50	0	50	13	13	13	13	50	50	50			0
527TA Land Appraisal	Foster/Ahern Ass	Jul-94	Jul-99	100	0	100	0	0	0	0	0	0	0			0
540TA Land Appraisal	Phelan/Foster	Sep-94	Sep-94	0	0	0	0	0	0	0	0	0	0			0
541TA Land Appraisal	TBA	Jan-97	Jan-99	0	0	0	0	0	0	0	0	0	0			0
593 Energy	TBA	Jan-97	Jan-99	50	0	50	6	6	6	6	25	25	25			0
TBA Energy		Jan-96	Jan-99	200	0	200	6	6	6	6	25	25	25			0
Project Total:		Jan-99	Jan-2000	100	0	100	0	0	0	0	0	0	0			0
				\$3,875	\$0	\$3,875	\$327	\$327	\$327	\$327	\$1,308	\$1,308	\$1,259	\$0	\$0	\$0

**BUSINESS AND OPERATIONS SUPPORT PROGRAM  
CAPITAL EXPENDITURE FORECAST FY 1998 - 2007**  
(\$000)

PROJECT	Project Participant	Notice to Proceed	Substant. Complete	Total Contract Amount	Projected Payments Since 6/30/97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	BEYOND FY2002
BUSINESS SYSTEMS PLAN 4,233	Various	Jul-94	Jun-97	\$1,803	\$1,803	\$0					\$0	\$0				\$0
	Phase I (FY95-97)	Jul-96	Jun-99	2,845	222	2,623	340	340	340	340	1,360	800	483			0
	Phase II (FY97-99)	Jul-98	Jun-01	1,000	0	1,000					0	0		500	500	0
	Phase III (FY99-01)	Oct-94	Dec-95	229	229	0					0	0				0
	90101 5933 Bldg 36 - Aux. Generator			\$5,877	\$2,254	\$3,623	\$340	\$340	\$340	\$340	\$1,360	\$800	\$483	\$500	\$500	\$0
Project Total:				\$38,355	\$12,824	\$25,531	\$667	\$767	\$667	\$767	\$2,898	\$8,493	\$2,772	\$5,279	\$5,823	\$2,465
Sub-total: BUS. AND OPER. SUPPORT																

pk-1

1803  
1236

98  
117,550  
98  
478  
478

2779

12,330.2 to Phase I

2,772 - 1,500

CONTINGENCY FUND EXPENDITURE FORECAST FY 1998 - 2007 (\$'000)																		
	Total Contract Amount	Projected Payments Thru FY97	Remaining Balance 6/30/97	JUL-SEP 1997	OCT-DEC 1997	JAN-MAR 1998	APR-JUN 1998	FY98	FY99	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	Beyond FY2007
4001. CAPITAL BUDGET CONTINGENCY																		
Boston Harbor Project																		
FY98	\$22,751	\$0	\$22,751	\$5,688	\$5,688	\$5,688	\$5,687	\$22,751	\$18,112	\$8,036	\$703	\$0	\$0	\$0	\$0	\$0	\$0	
FY2000	8,036	0	8,036															
FY2001	703	0	703															
FY2002	0	0	0															
FY2003	0	0	0															
FY2004	0	0	0															
FY2005	0	0	0															
FY2006	0	0	0															
FY2007	0	0	0															
Total Harbor Contingency	\$48,802	\$0	\$48,802	\$5,688	\$5,688	\$5,688	\$5,687	\$22,751	\$18,112	\$8,036	\$703	\$0	\$0	\$0	\$0	\$0	\$0	
BHP Claim Reserve	\$17,851	\$0	\$17,851	\$0	\$0	\$0	\$0	\$0	\$17,851	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Other Authority Contingency																		
FY98	26,098	0	26,098	6,525	6,525	6,525	6,523	26,098	26,841	31,306	38,165	39,044	29,510	15,489	7,940	6,491	4,528	0
FY2000	26,841	0	26,841															
FY2001	31,306	0	31,306															
FY2002	38,165	0	38,165															
FY2003	39,044	0	39,044															
FY2004	29,510	0	29,510															
FY2005	15,489	0	15,489															
FY2006	7,940	0	7,940															
FY2007	6,491	0	6,491															
FY2008	4,528	0	4,528															
FY2009																		
Total Other Contingency	\$225,812	\$0	\$225,812	\$6,525	\$6,525	\$6,525	\$6,523	\$26,098	\$26,841	\$31,306	\$38,165	\$39,044	\$29,510	\$15,489	\$7,940	\$6,491	\$4,528	0
Total Authority Contingency	\$283,365	\$0	\$283,365	\$12,213	\$12,213	\$12,213	\$12,210	\$48,849	\$44,952	\$39,342	\$38,868	\$39,044	\$28,510	\$15,489	\$7,940	\$6,481	\$4,528	\$0





